Flammarion

1600-1750

Baroque Architecture

Frédérique Lemerle and Yves Pauwels

Baroque Architecture leads the reader through the major creations of the period throughout Europe and beyond, and provides a fascinating account of how this grandiose style developed in relation to the unique urban culture of each nation where it became popular.

To admire the undulating façade of Rome's San Carlo alle Quattro Fontane, the Palace of Versailles' lavish succession of rooms, or the seemingly endless array of columns and windows of St. Petersburg's Winter Palace is to observe architecture in the act of glorifying the key powers of the day—the empire, wealth, the Church, and even mankind's inventiveness.

In-depth coverage of the architecture of France and Italy is coupled with serious analysis on how the style developed in Spain, Portugal, England, Central Europe, Russia, and Scandinavia, as well as in the Spanish and Portuguese colonies in the Americas. Giving the richest and most complete account of its history to date, this is an essential introduction to Baroque architecture for the general reader.

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Rome, Sant'Ivo alla Sapienza, coupole.
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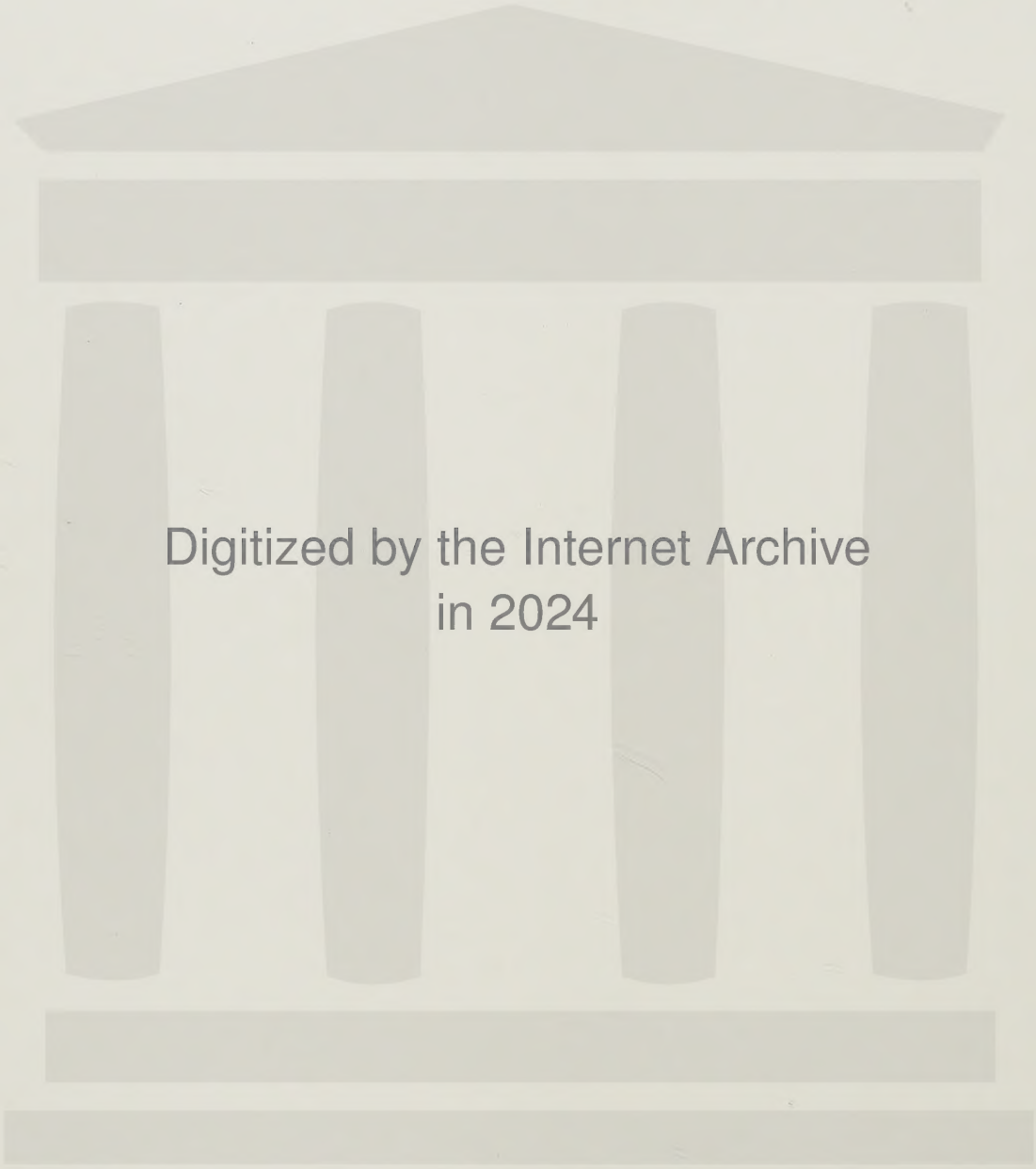

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Baroque Architecture

1600–1750

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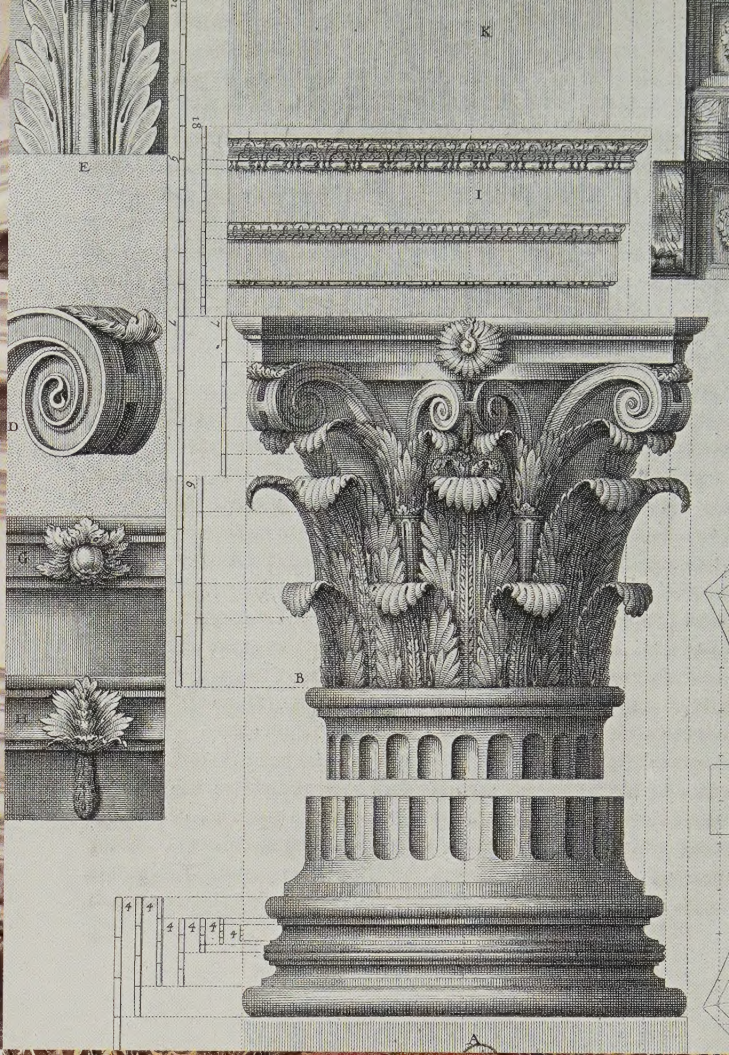
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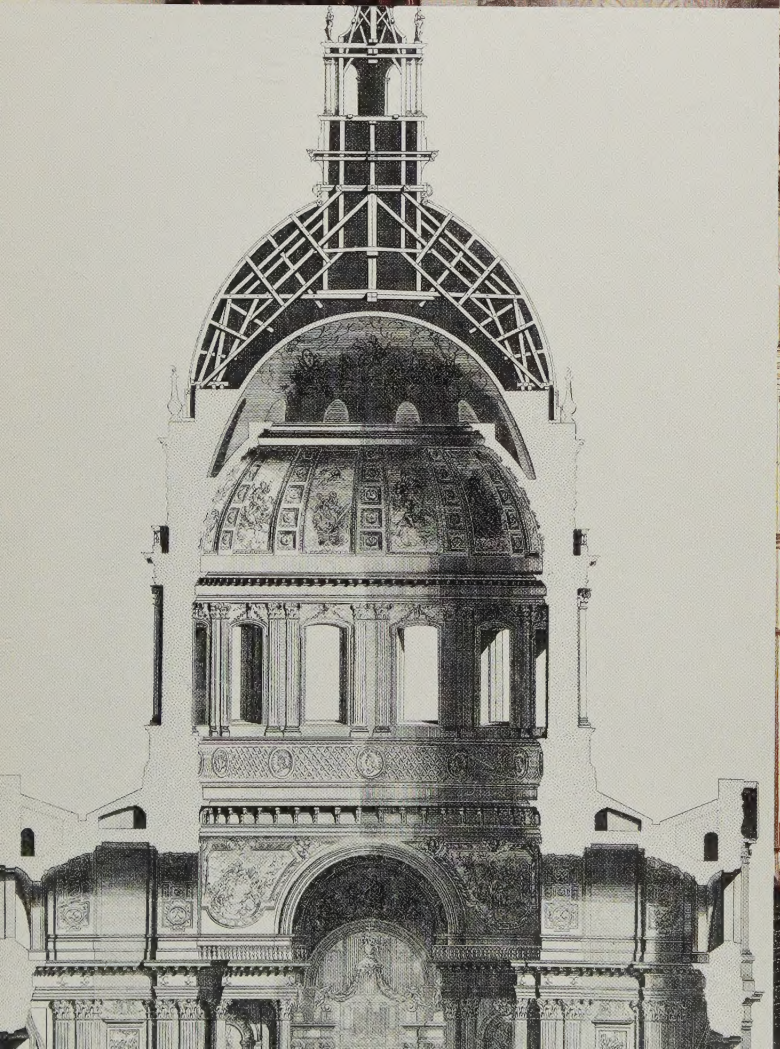

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IN HONOREM SS TRINITATIS ET D CAROLI M DC LXVII

"Baroque?"

EVER SINCE HEINRICH WÖLFFLIN published his famous book, *Renaissance and Baroque*, in 1888, architecture has occupied the center of the debate on the Baroque. Even more than the paintings of Rubens or the frescos of Baciccia, it is the churches of Rome and Prague that have fascinated the greatest critics, from Wölfflin himself to André Chastel and Victor-Louis Tapié. In point of fact, the buildings of the 17th and 18th centuries lend themselves better than all other artistic creations to the formal analysis that reveals stylistic features. In consequence, theoretically at least, art historians addressing the history of architecture in those two centuries no longer have to bother with the famous question, "You said, Baroque?" that Philippe Beaussant was still asking musicologists a few years ago.[1] It is impossible though to do without the term "Baroque." But its use is not without risks, as it remains difficult, even in the wake of the many great minds who have pored over it, to ascribe to it a precise, unambiguous meaning. As Henriette Levillain has recently demonstrated for "Renaissance" and "Baroque" and then for "Baroque" and "classicism," the minute one ventures beyond the confines of a single country or artistic discipline, confusion ensues.[2] Even limiting ourselves to architecture, there are patent disparities in terms of chronological milestones and stylistics between Italy and Spain, or between France and Germany.

In some eyes, the norms of "classical" architecture lie in the straight lines and right angles generated by the column-and-lintel system, the regular arcs of the circle, the use of symmetry and mathematical proportions, in modular systems—in a word, in the exemplary legibility of plane and surface. Does this amount to saying that, in contradistinction, the Baroque abandons column and architrave and prefers buildings with tottering elevations and bristling with acute or obtuse angles? Or that Baroque architecture throws off symmetry and bases its proportions in mathematics alone? Or is it allergic to sobriety? There is such a plethora of counterexamples to these notions in the works of some of the greatest 17th-century Roman architects, including Bernini and Borromini, that such criteria are surely worthless. But neither can one seriously accept other features more generally proposed for the Baroque: irrational curves, a free hand with respect to scale, Colossal orders, decorative overload. In this case, the façades of the Certosa in Pavia or Palladio's Redentore in Venice could perfectly well be categorized as Baroque.

Francesco Borromini,
San Carlo alle Quattro Fontane,
Rome, façade.

1. *Vous avez dit baroque?*, Arles: Actes Sud, 1994 (1st ed. 1988).
2. *Qu'est-ce que le baroque ?*, Paris, Kincksieck, 2003.

One thing is certain, however: since the 1500s, European architecture had been speaking the same language. One of Wölfflin's great merits is that he reconsidered the chronological watersheds, and so dated the onset of the Baroque in Rome to the first years of the 16th century. For it was at this juncture that a new conception of the architectural repertoire developed in the work of Bramante, Raphael, and Peruzzi, centering on the plans of Julius II for St. Peter's. It was quickly defined and formalized by a combination of the philological study of Vitruvius's text and the "archeological" investigations of the ruins of Rome. In 1537, Sebastiano Serlio's *Regole generali di architetura* proposed the first clear and accessible grammar of what was then regarded as "Vitruvianism," i.e., an original synthesis of antique theory and practice reconfigured according to modern needs and sensitivities.

It was also in this context that grandiose plans for St. Peter's were drawn up and wonderfully expressive buildings like Bramante's Palazzo Caprini were designed. In them, decoration was deliberately divorced from structure, with results that were alien to the ideals of the humanist Renaissance of the Quattrocento. The architects of the 16th and 17th centuries adopted this new language, which from now on was to remain the European *koinè* right up to the dawn of the 19th century. The Tuscan, Doric, Ionic, Corinthian, and Composite orders are five variations in an architectural grammar that was embraced from Granada to Paris, from London to Moscow: Vitruvianism, a modern doctrine, quite distinct from the letter of Vitruvius's *De architectura*.

From this point of view, the importance of the Italian and foreign architects who trained in Italy and who worked in Madrid and Lisbon, Munich and Prague, Krakow and St. Petersburg should be highlighted, since it was they who applied and disseminated the idiom forged and developed in Rome. All Europe was thus overrun by Italian art, and even the independently minded English succumbed to the more austere charms of another Italy—that of the Veneto of Palladio and Scamozzi—more appropriate to their temperament. France, however, resisted the invaders, even holding firm against the most prestigious of the great Romans who sallied forth to attack the palaces of her kings. Bedazzled for a moment by Bernini (the "Cavalier Bernin"), France ultimately rejected his imposing projects for the Louvre. No Italian architect enjoyed a successful career there, save in the minor fields of hydraulics, with the Francines, or set-design, with the Vigarinis.

A vocabulary, though, however pervasive, is not enough to characterize a manner or style. Moreover, the architecture of Bernini was different from that of Sangallo; and that of Jules Hardouin-Mansart was different from that of Philibert De l'Orme. For, if the

language remained the same, the rhetoric changed. In exalting in their discoveries and delighting in their innovations, Renaissance architects played around with this still fresh language. Each in his own way—and sometimes with tongue in cheek—Giulio Romano, Michelangelo, and De l'Orme all bypassed the rules, ironically inventing forms that ran roughshod over Vitruvian morphology. But, to be appreciated, these deviations presuppose knowledge of the rules, grammar, and forms. Many of the elements of 16th-century architecture exploited a pre-existing culture: "Mannerism" implies a familiarity with a wealth of erudite references. Architects earned kudos by quoting from famous ancient examples—always, moreover, in a context quite different from the original; but, since there are no such things as architectural quotation marks, the references can only be picked up by a well-informed observer. In the same way, an allusion to the vault of the Sistine Chapel in a picture by Vasari or Zuccari can only be spotted if one is familiar with Michelangelo's original. The Mannerist art of the 16th century is essentially "far from the vulgar," as Joachim Du Bellay put it with respect to the poetic esthetics of La Pléiade. The key elements of the Mannerist style require a familiarity with the references in order to be meaningful. This was probably the essential difference between it and 17th-century architecture. For a number of political and religious reasons, the art of the Seicento no longer seemed satisfied with these erudite, subtle, and elitist balancing acts. Architecture, like painting and sculpture, had to appeal immediately and completely to the senses, without the mediation of cultural allusion. Now, *affetti* were preferred to *concetti*. Caravaggio's chiaroscuro effects and Rubens's swirls of color can be perceived by anyone. Similarly, Monteverdi, in his madrigals, opted for the seductiveness and emotion of melodies ornamented with imitative figures, eschewing the intellectual subtleties of counterpoint. In architecture, the elements most often employed were the immediately visible ones. A curved façade, a lavishly decorated and gilded church interior, and a gigantic colonnade all expressed the beauty or grandeur of an edifice directly to the eyes of the beholder. With a few brilliant exceptions, anything dealing with figures of meaning—quotations, deliberate grammatical "errors" or at least liberties, recherché explorations of the forms of bases, capitals, or entablatures—fell out of favor.

This rhetoric of unmediated forms assumed various guises depending on the country or region concerned. The adoption of abundant ornament, the constant recourse to sculpture, stucco, and even painting, made its way into southern Italy as well as into Catholic Germany and Spain—even if other artists in those regions also developed less dense idioms. On the other hand, work on the instability of interior

FOLLOWING DOUBLE PAGE
Map of Europe taken from *Le Théâtre du monde ou Nouvel Atlas*, by Joan Blaeu, 1640.

space and the taste for complex volumes that started out with the experiments of Borromini and Guarini in Italy and developed in Germanic lands seem to have been alien to the Iberian peninsula, with the exception of Portugal. As for France and England, they followed paths of their own. The French "grand style" is undoubtedly founded on the same rhetoric of forms, but the striving for grandeur, more than elsewhere related to the concept of *convenance*—suitability—reins in a decorative elaborateness that takes refuge instead in the treatment of the interior. It is problematic too to speak baldly of the Baroque in England, where the influence of Palladian Italy led architecture down a very different road.

In its variety, the rhetoric of architecture relies on figures that tend towards one and the same goal: effectiveness, in both practical and symbolic terms. Cities, which were experiencing unprecedented growth during this period, had to ensure a convenient and safe environment for their inhabitants. A new type of town planning, in parallel with the arts of fortification, was producing a great range of majestic solutions. Comfort levels and room layouts in private residences were much improved, princely and ecclesiastical palaces ostentatiously declared their occupants' power and glory, while the churches vied with each other in splendor to attract the greatest number of faithful. Such effectiveness then lay at the heart of the practice of architecture, but it also governed the forms of its theoretical expression and diffusion. The 17th century thus also witnessed a swelling tide of texts on architecture: esthetic treatises, technical manuals, models, and pattern books. In these fields, at a time when French was imposing itself as *the* language of the cultivated elite in Europe, France took over the baton from Italy. The circulation of treatises between countries played its part in forging a Europe in which, while embracing differences, one spoke the same language.

But at every place and time the effects sought by the artists remained instantly perceptible, and to appreciate them one did not need to know Rome by heart or pore over one's Vitruvius. They are not necessarily Baroque: only architecture spawned in Rome in about 1630 and its ramified lineage, which is limited largely to southern Europe and Catholic countries, presents the group of characteristics generally designated by this term. Yet French and English art also, through other means and by other routes, fulfilled the demands of legibility and efficiency shared by all nations in this period of the Baroque, which provided an infinite number of expressions of the virtues of the grandiose and the intoxication of movement.

Caravaggio, *The Martyrdom of St. Matthew*, oil on canvas, 1599–1600. Cappella Contarelli, church of St. Luigi dei Francesi, Rome.

Anali

Galli

Belgi

Castiliani

GROENLAND IÆ PARS

C. Farewel

C. Cornwallis

Illyes C.

C. Record

Quine Elizabet Portlant

Addlinger

Armarfiord

Brelevig

Rangasand

Breydafiordur

Ondverdarnes

Landdrunga

Stadarfiall

Stapholt

Skalholt

Geje eyar

Tung

Grund

Laug

Sedaar

Kaasanes

Westmanna eyar

ISLANDIA

Almanger

Helgafiord

Ingulfiord

Trikillsfiord

Skagafiord

Grims ey

Flatey

Kandagnapper

Fulmungarvig

Hulfsfiord

Langenes prom.

Strand

Hecla m.

Kirkeber

Ploreid

Kogdafiar

Guravig

Snefiall Jokul

Circulus Arcticus

OCEANVS

DEVCALEDONIVS

OCEANVS

OCCIDENTALIS

MARE ATLANTICVM

Fero Ins.

Muggenes

Bishops Fero

Schetlãt

Mainland

Yetland

Yelle

Sando

S. Magar

Foole

Orcades Ins.

Rona

Augusti

S. Kilda

Hebrides sive Hebudes quæ et Menanias Ins.

S. Peter

Stakes of Ard

HIBERNIA

Barwich

Noort zee

Galway

Bodkes rock

Lymrick

Kilmaloke

Kork

I. Weyus

Mussenhead

Cape Clear

The Lands End

Sorlingas

OCEANVS BRITANNICVS

Abrojant

Seims

Ponlarlin

Bayonne

Camino

C. Porto

Barlengas

C. Roxeut

Tejo flu.

Zuccunbra

Lisbona

Setuval

C. Espichel

C. de Trois terres

C. Ortegal

Ferol

Ribadeo

Lugo

Gall. & Gia.

Bayona

Camino

Oporto

M. Reyo

Braga

Portu

Aveiro

Coimbra

Cyprien

Guarda

Leiria

Tomar

Thomar

Alcantara

Placencia

Madrid

Toledo

Talavera

Cuenca

Merida

Ciudadreal

Cordoua

Auduiar

Alcalareal

Granada

Seuilla

Alhama

Ronda

Malaga

Cadiz

Gibraltar

Tarifa

Estrecho de Gibraltar

C. Spartel

Tetuan

Larache

Salvage

Madera

Porto Santo

Ponsyal

Islas deserta

Palma

Tasfacorda

Gomera

Ferro

P. de Nago

Santo Cruz

Tenerifa

Canaria

Gran Canaria

Cabrion

Lancerota

Forte Ventura

C. de Non

C. Cantin

Mamora

Araxe

Gusiba

Tayeget

Gosa

Cirilitheta

Hadechi

Marruecos

MAROCHO

FESSA

Fez

Tefza

Melilla

Oran

Tenes

Arzeni

Algier

Teddeles

Gien

Bugia

BARBARIA

C. Falcon

C. Ferrato

Bona

Collo

Minorca

Maiorca

Iuica

Promontorium

C. de Palos

Alicant

Murcia

Granada

Andaluzia

Valencia

Catalonia

Arragon

Moladelsgon.

Tortos

Barcelona

Girona

Perpinya

Carcassona

Narbona

Montpellier

Aigues Mortes

Arles

Marseille

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Bourdeaux

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Cornwall

Monmouth

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Cardigan

Radnor

Montgomery

Denbigh

Flint

Anglesey

Caernarvon

Merioneth

Brecknock

Carmarthen

Cardigan

Pembroke

Flanders

Holland

Zeeland

Brabant

Gelderland

Utrecht

Overyssel

Friesland

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Schelling

Goree

Calloo

Bolduc

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Nimmegen

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Deventer

Campen

Kampen

Harlingen

Dockum

Leeuwarden

Franeker

Sneek

Workum

Hindeloopen

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Medenblick

Horn

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Haerlem

Leyden

Amsterdam

Gouda

Rotterdam

Delft

Dordrecht

Briel

Middelburg

Flushing

Sluys

Ostend

Dunkirk

Gravelin

Bergen

Mons

Valenciennes

Tournay

Lille

Arras

Douay

Cambray

Bapaume

Peronne

Amiens

Abbeville

Montreuil

Boulogne

Calais

Ardres

Guines

Hammes

Gravelines

Dunkirk

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Dixmude

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Sens

Auxerre

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Bourges

Orleans

Blois

Tours

Poitiers

Angoulesme

Limoges

Perigueux

Agen

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Oleron

Rochefort

Brouage

Xaintes

Saumur

Angers

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Rennes

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Cherbourg

Caen

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Lisieux

Honfleur

Harfleur

Dieppe

Rouen

Evreux

Dreux

Chartres

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Meaux

Provins

Montereau

Fontainebleau

Melun

Corbeil

Etampes

Pontoise

Mantes

Vernon

Gisors

Beauvais

Compiegne

Soissons

Laon

Vervins

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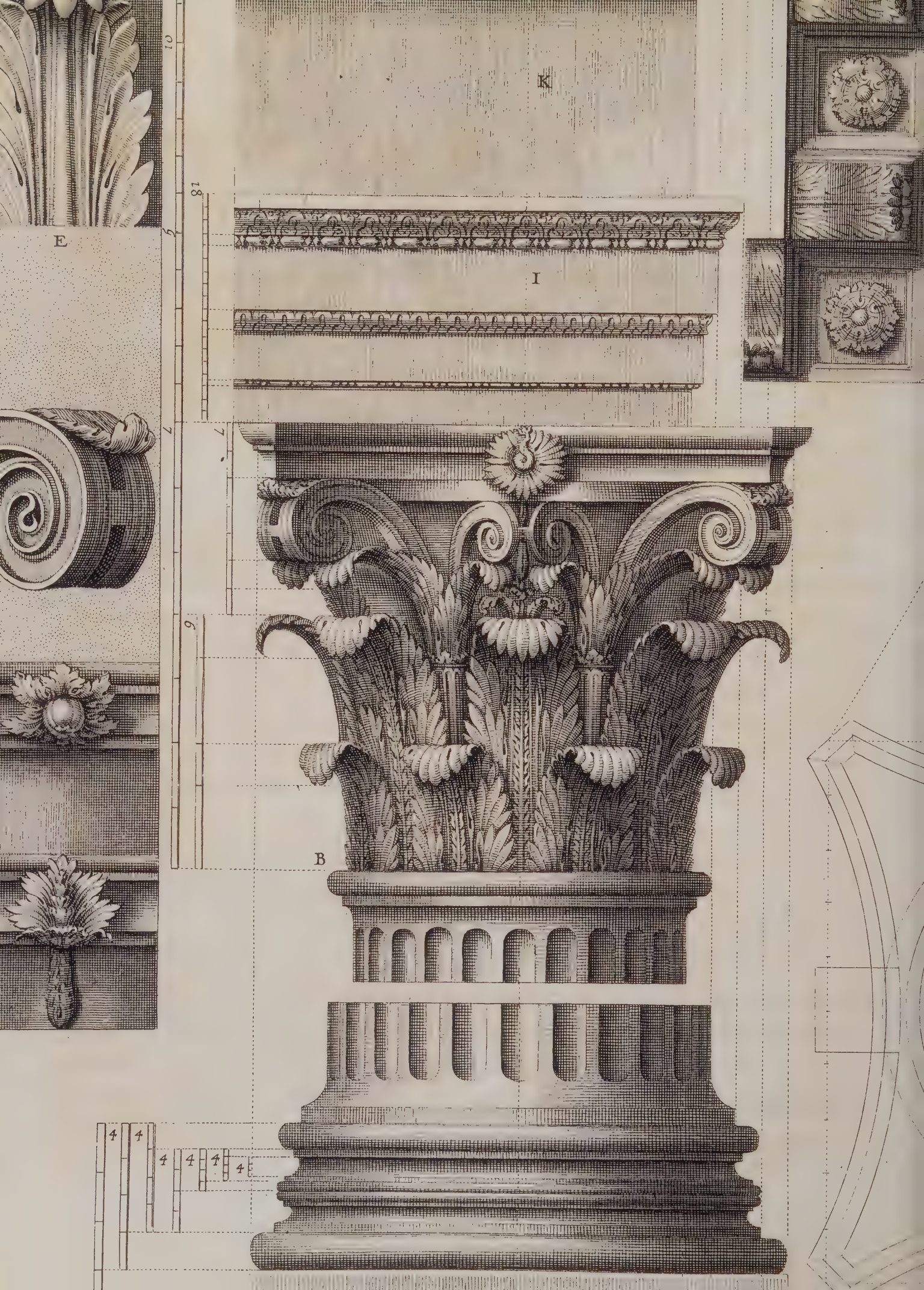
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1 Figures of Effectiveness

New urban sensibilities, new cities: the age of town planning

1.
Place Royale
(now place des Vosges), Paris.

A NUMBER OF ARTIFACTS testify to a renewal of interest in the city in 17th- and 18th-century Europe. In France, perhaps the most famous of these are the *plans-reliefs*, or scale models, of the frontier towns made for Louis XIV, ostensibly for military purposes. But other models had less bellicose aims, such as the large wooden *modello* Pope Alexander VII kept in his chamber showing the various stages in the embellishment of Rome. Plans became more numerous and increasingly precise: a plan of Paris was engraved by Jacques Gomboust in 1652, and another ordered by Michel Étienne Turgot (the father of Louis XVI's minister) from the draftsman Louis Bretez was engraved by Claude Lucas in 1739; the plan of Rome was engraved by Lieven Cruyl in 1665 and in 1748 by Giambattista Nolli. Finally the Flemish and Italian view-painters van Wittel, Pannini, and Canaletto made Rome, Naples, and Venice a subject for their pictures, spawning a new pictorial genre.

Although a revival in town planning was clearly underway, the schemes and forms used were not new. In the 15th century, the Italian Renaissance imagined "ideal cities" with geometrically regular plans whose formal perfection was supposed to guarantee harmony and well being for their inhabitants. Certain achievements, such as the aggrandizement of Ferrara under the Este, had taken these principles as their starting point.

After 1600, the emergence of new powers and new states fostered the enlargement and even the creation of cities designed to be the incarnation of the reigning powers: Turin for the dynasty of Savoy in Piedmont, Versailles for Louis XIV, and St. Petersburg for Peter the Great grew or emerged in accordance with principles clearly enunciated by architects and engineers. On a smaller scale, Mannheim, founded in 1606 by the Elector Palatine Frederick IV and razed by French troops in 1697, was rebuilt on a grid plan from that year by the Elector Johann Wilhelm; Karlsruhe, established by Margrave Karl Wilhelm in 1715, fans out from the Schloss, like Versailles. Other more modest towns, the fruit of the will of some minister at the apogee of his power, were ready to vanish whenever he fell or died, like Henrichemont, founded in 1608 by Sully for the Protestants, or Richelieu, created from scratch by the cardinal-duke after his elevation to the duchy peerage in 1631. The fiefdom of Philip III's omnipotent minister Lerma in Spain expanded following the court's move to Valladolid in 1601. Smaller towns were created or modernized for

strategic reasons, and fortifications were painstakingly strengthened, such as Longwy, Mont-Louis, Mont-Dauphin, Neuf-Brisach on the French border, Willemstadt and Coeworden on the Dutch border, and the fortified ports of Rochefort, Brest, and Lorient, the new openings Colbert established on the Atlantic.

In the shadow of their citadel, older cities such as Lille sprouted new districts that were regular in plan. These new cities had checkerboard or radio-concentric plans with streets carefully organized around points of convergence—a castle, church, or parade square—where the ideals proposed by Alberti and Leonardo in the Quattrocento were applied more or less successfully.

For larger capitals settled long ago and with an already high population, the problems were of a different nature. In Rome, Sixtus V relied on the existing road network, expanding it into relatively underdeveloped *regiones* (estates) in order to improve access between the main basilicas visited by pilgrims. In Paris it was difficult, not to say impossible, to systematize the medieval districts; the city remained unplanned, even the newly laid out zones. Sometimes natural disasters permitted a major reorganization, such as the earthquakes that led to the reconstruction of Catania and Lisbon, for example, or even wholesale re-creation, as in Noto.

2.
Place Royale
(now place des Vosges), Paris.

3.
Nicola Salvi,
Fontana di Trevi, Rome.

Notwithstanding, it was always necessary to take into account the independence and initiative of private property owners. After the Great Fire of London in 1666, the grid plan designed by Christopher Wren, which was based on the nerve centers of the pre-existing town, could not be carried out in spite of a royal decree. Hence, work in cities was often limited to the realization of specific projects, the most spectacular being the great squares. In Rome, existing *piazze* were improved: Bernini put his talents as a sculptor and architect to work on the Piazza Barberini (Piazza del Tritone), the Piazza Navona (Fontana dei Quattro Fiumi and Fontana del Moro) and the Piazza del Popolo (restoration of the gate and the nearby façade of Santa Maria).

In France, the *place* embodied the status of the king, framed and emphasized by almost identical façades: in Paris, the place Dauphine for Henry IV, the place Royale (place des Vosges) [**1** and **2**] for Louis XIII, the place des Victoires and place Vendôme for Louis XIV, and the place Louis XV (place de la Concorde) for his successor spawned countless imitations, including splendid specimens in the provinces, such as the place Bellecour in Lyon, the place de la Bourse in Bordeaux, and the place Stanislas in Nancy. Pierre Puget provided sumptuous projects for a royal *place* in

Marseilles that were unfortunately never enacted. Comparable to these French royal squares was the Terreiro do Paço at Vila Viçosa, the stronghold of the dukes of Bragança in Portugal, where a vast open space joins the ducal palace to a church-cum-mausoleum around an equestrian statue of João III. In the Iberian Peninsula, great *plazas* were opened up, but these were less directly linked to the glorification of a prince: the Plaza Mayor in Madrid and that in Salamanca, and the Praça do Comércio in Lisbon. This model was exported to the Americas, where each major city has a *plaza mayor*, often decorated with arcades, which was an administrative, commercial, and religious urban hub (complete with city church), as in Cuzco in Peru or Antigua, the ancient capital of Guatemala. Such squares were adopted in every city in Europe, albeit for varying purposes—Covent Garden in London, the Amalienborg in Copenhagen, and the place Royale in Brussels.

To add to the inhabitants' freedom of movement and well-being, vast avenues were laid out for promenading: a boulevard planted with trees or a *corso*, often created on the edge of the city or on the site of abandoned ramparts, were a favorite with high society, who would parade down the Cours-la-Reine in Paris, the Cours in Aix-en-Provence (today cours Mirabeau), the allées de Tourny in Bordeaux, London's Pall Mall, or Berlin's Unter den Linden.

Another way of improving the city was to construct monumental gateways or triumphal arches as ornaments to the glory of the government. Such monumental buildings mushroomed in Paris (porte Saint-Martin, porte Saint-Denis) and in the provinces (porte de Paris in Lille). The embellishment of a city often went hand in hand with an evident concern with the convenience and comfort of its denizens. Bridges were the subject of particular attention, as attested by the creation in France in 1716 of a *corps* at the Ponts et Chaussées (the highways and bridges agency) and by the foundation in 1747 of an engineering training school. In the 17th century, the Pont-Neuf in Paris (1599–1606) and the Pont-Neuf in Toulouse, on which Jacques Lemercier worked, were the first bridges to be built without houses, the aim being to improve traffic flow and offer vistas of the river. Westminster Bridge in London was another, later example (1750). Many existing bridges were modified in appearance, like the Ponte Sant'Angelo in Rome, which was decorated with sculptures by Bernini. Rome also saw the most extraordinary examples of fountains, constructions that were both architecturally magnificent and provided an amenity to the population: the Fontana di Trevi **[3]** is surely the most majestic. Less endowed with water, Paris was prohibited from realizing such spectacular effects, but the Fontaine de Grenelle was created through a similar concern to improve supplies.

The apogee of military architecture

THE 17TH CENTURY marked the high point of military architecture. It was at this time, which witnessed the zenith of Italian and Dutch defensive systems, that the most splendid citadels were built and that the various guilds of military engineers, as distinct from the infantry and the artillery, were set up, as well as the schools and academies to train them.

So often on a war footing, governments were encouraged to multiply the number of fortifications. As a result of the eighty-year conflict during which Spain sought to quash her rebellious subjects in the Protestant United Provinces (1567–1648), skilled people migrated north, where the engagements were concentrated and where defense became of capital importance. At the time of the Thirty Years' War (1618–48) and Great Northern War (1700–21), many German and Polish cities set up fortresses using foreign, often Swedish expertise. After 1667, Louis XIV's campaigns against the Habsburgs in the Netherlands and in the Rhineland entailed the erection of a great belt of defensive works without precedent in Europe.

The unquestioned French preeminence in the field of military architecture was due to the significant financial means granted by their king, as well as to a highly effective superintendent, Sébastien Le Prestre de Vauban (1633–1707), an exceptional figure who had to ensure, under the direction of Colbert and the secretary of state for war, Louvois, the security of the borders of the kingdom to the north and east, as well as the strategic naval ports of the Atlantic and Mediterranean coasts and the northwestern shoreline. The collection of *plans-reliefs* of the strongholds built or renovated testifies to the ambitious program of fortification commissioned by the Sun King.[1]

At the same time, military architecture was profoundly modifying the urban landscape. From the mid-16th century, Turin, the capital of the states of the House of Savoy, underwent successive waves of enlargement within a sophisticated system of urban fortifications, the most modern of their time, linked by a cordon sanitaire to a pentagonal citadel with five bastions, designed by Francesco Paciotto in the previous century. The most "pretty" city in all Italy, in all Europe even, according to Charles de Brosses, shows

1. These *maquettes*, made on the spot by military engineers to a scale of one *pied* to 100 *toises* (that is, 1/600), were subsequently transported to the Louvre. Of the two hundred or so still extant, about thirty were fashioned during Vauban's lifetime. Since 1986, this public collection, state property, has been split between Paris (Hôtel des Invalides, Musée des Plans-Reliefs) and Lille (Palais des Beaux-Arts).

how city planning and fortification could advance hand in glove.[2] In Lille, the great urban project linked to the construction of the citadel was intended to ensure the king the loyalty of a population that had maintained important links with the Spaniards. The famous plan of St. Petersburg envisioned by the French architect Alexandre Le Blond incorporated the palace of Peter the Great, the Peter and Paul fortress, the Admiralty complex and the shipyard in one perfect oval [4]. Today often the only surviving vestiges of a city's defenses are its gateways, whereas the outer walls have all but disappeared.

Various engineering corps were founded at the end of the 17th century, including in Denmark by Christian V in 1683, in Sweden in 1695, and in the Netherlands in 1697, with Spain following suit in 1710, England in 1716, and the Russian empire in 1725. In France, the Corps Royal du Génie (for the engineers) and the Département des Fortifications were established in 1691 at Vauban's instigation.

The military engineers

During the Renaissance, Italy had the best experts, those able to devise new systems of fortification; they then went on to France, England, Spain, and the Germanic states, where they formed the driving force of the engineering corps. By the end of the

4.
Alexandre Le Blond,
plan of St. Petersburg, 1717.
Science Library of the Russian Academy of Sciences,
St. Petersburg.

2. *Lettres d'Italie*, March 11, 1740. Paris: Mercure de France, 1986, II, p. 509.

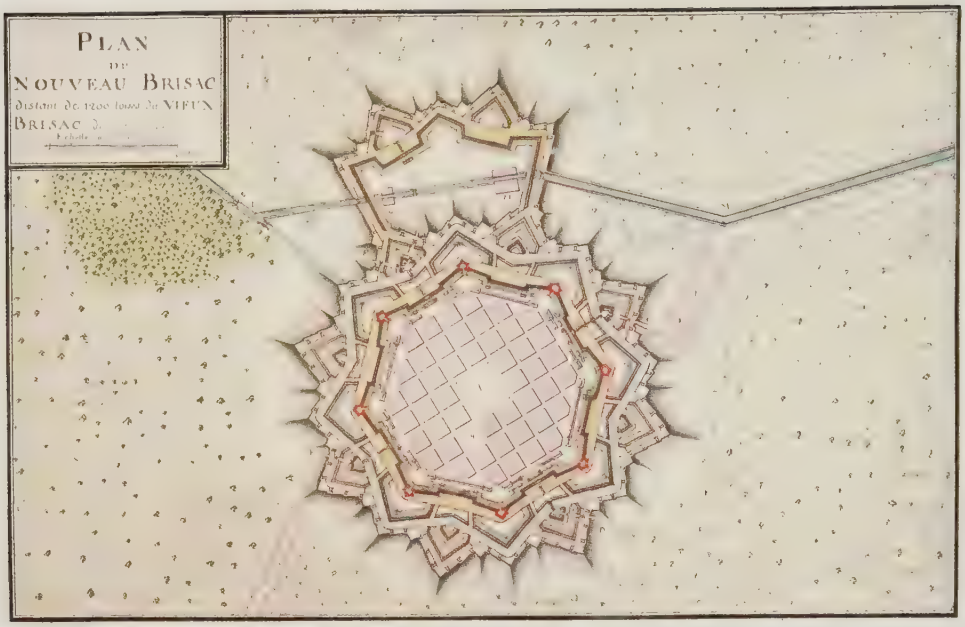
16th century, they were to be succeeded by engineers from those countries or from other lands: Cristóbal de Rojas (1555–1614) worked on the fortifications of Cádiz, one of many ports attacked by the English and Dutch corsairs. The Spanish monarchs, concerned above all with their New World colonies, often called upon engineers from all over Europe.

Hence, for Mexico, in 1612 Philip IV recruited the Dutchman Adrian Boot, who laid out Veracruz and Acapulco. In 1680, the port of Campeche was fortified by the Austrian hydrographer Jaime Franck. England and France, on the other hand, had long benefited from fortification departments. The most famous English military engineer was Paul Ive, who built a fort at Falmouth in 1597. There subsist but few achievements from the beginning of the 17th century; the Civil War however sparked further works after 1642. Whereas Parliament employed Dutch and German engineers, King Charles I called upon Bernard de Gomme from Lille (1620–1685), who, after the Restoration, worked at Portsmouth, Plymouth, and Harwich. He was replaced by the Swede Martin Beckmann (died 1694), the renowned engineer and hydrographer. By the end of the 17th century, English engineers were practicing primarily overseas: the British Antilles were fortified by, amongst others, Christian Lilly from Hamburg and Talbot Edwardes.

In France, under Henry IV, military engineers—all French except for Agostino Ramelli, who held a post in Paris—continued the efforts undertaken during preceding reigns. The fortifications of Toulon, designed in 1585 by Ercole Negro, were finished in 1600. In 1610, the ambitious site of Cordouan, on which Louis de Foix had worked until 1599, followed by Claude Chastillon, was finally completed. The rebuilding of the lighthouse tower—essential due to its strategic situation on the mouth of the Gironde—had proven both extremely expensive and technically demanding. Happily, thanks to the talent of the engineer, the result was a veritable work of art **[5]**. In 1627, during the reign of Louis XIII, Pierre de Conty built the huge citadel in the port of Le Havre de Grâce, whose site had been selected when Francis I was on the throne and for which significant construction had been carried out since 1541 by the Italian Girolamo Bellarmato.

Under Louis XIV, the royal engineering corps began to specialize. Vauban was the last representative of these preeminent multidisciplinary experts, some of whom became renowned architects or theorists, like Salomon de Brosse, Philibert Le Roy, Pierre Le Muet, and François Blondel. Commissaire Général des Fortifications (1678), Lieutenant des Armées du Roi (1688), and Maréchal de France (1703), Vauban designed a double line of fortified towns known as the *pré carré* to seal off the most vulnerable passes and reinforce the northeastern borders of the kingdom. In the east, Vauban created nine strongholds to protect the frontiers, including Neuf-Brisach on the German bank of the Rhine (1698). For this city-fortress, considered his masterpiece, he laid down an enclosure of octagonal outline. The checkerboard plan ensured the functional distribution of public buildings and dwellings grouped around a central square intended for maneuvers and parades. This ideal city with its monumental gates offered a perfect combination of civil and religious activities (town hall, markets, church) with the military areas (barracks, stores, staff headquarters) **[6]**. On the northern borders, Vauban improved the fortification system by combining the Italian system of obtuse-angled bastions employed in the 16th century with the more pointed bastions adopted by the Dutch in the 17th. For the "Queen of

5.
Cordouan Lighthouse
(Claude Chastillon,
Topographie française, Paris, 1641,
Bibliothèque de l'Arsenal,
Print Room, f. 178).



6

7

6.
Vauban,
plan of the citadel of Neuf-Brisach.
7.
Vauban,
citadel of Lille.

Citadels," in Lille, retaken in 1667, he returned to the pentagonal structure of the citadel of Antwerp (1567), itself a copy of that designed for Turin by Paciotto.

This form, reputedly the most perfect, ensures the rational arrangement of spaces and freedom of movement between the combat zones and the inner zones, with their groups of buried bastions, ditches, and casemates, ideally adapted to the new conditions of war [7]. Moreover, the typically French design of the principal buildings (gates, arsenal, chapel) symbolically reminded the population of the might of their new master. Vauban entirely refortified the port of Dunkirk, connecting it to the sea through a channel to prevent it sanding up. A pragmatist, he was always prepared to adapt a fortification to its site: in Besançon, he opted for a bastioned tower with casemates (Tour Rivotte), while at the fortress at Huningue, he doubled the outworks. With mountain locations, he had no hesitation in reverting to the medieval system,

of staggered enclosures, which was better suited, as at Briançon, while on the plains, he would resort to locks able to flood the site and halt the enemy in its tracks **[8]**. For coastal positions, however, he designed a type of small semicircular fort adapted for raking fire over water (Tour Vauban at Camaret).

Vauban's great rival was Menno van Coehoorn (1641–1704), whom he faced at Namur. This military architect and mathematician, artillery general, lieutenant-general of the infantry, and governor of Flanders, in particular fortified Bergen op Zoom, his finest achievement. Entrusted by William III with the task of reorganizing the fortresses of the Low Countries, he adopted the Scandinavian tradition of moats filled with water, as well as the use of *rasant* (low-lying) ramparts and brick bastions with earth embankments above, a system perfectly adapted to sandy soils located below sea level. Its relatively low cost made it popular too among the English and the Swedes. The artillery towers of the Swede Erik Dahlberg (1625–1703) were little more than an adaptation and improvement of another old Scandinavian tradition. Identical structures were used at Kronstadt for the fort of Peter the Great. Between 1698 and 1709, he undertook major works on the Sea of Azov, building an artificial harbor at Taganrog, which was to be used as a base for his Black Sea fleet.

Henrik Ruse (1624–1674), who worked in the United Provinces for the king of France, the Venetian Republic and for several German princes, renewed the ancient method of Dutch fortification. For the king of Denmark Frederick II, he designed the citadel of Frederikshavn near Copenhagen. Begun in 1661 and completed in 1667, it is one of the most beautiful fortresses built in the 17th century **[9]**. In Brandenburg, the most famous engineer of the Elector was Gregor Membhard (1607–1618), who constructed the fortifications of Berlin. After 1650, the city was transformed by the engineer La Vigne. Frederick-William (1640–1688) developed a remarkable fortifications office, comprising engineers, cartographers, and architects.

8.
Scale model of Briançon.
Musée des Plans-Reliefs, Paris.

9.
Citadelle of Frederikshavn
(the Kastellet), Copenhagen.

Treatises on fortification: engineers and scholars

The 17th century also saw a boom in publishing devoted to military architecture. Treatises, handbooks, and manuals came off presses throughout Europe. The Spaniard Cristóbal de Rojas, professor at the academy of mathematics in Madrid, was the author of the first treatise of military architecture in Spanish, *Teoria y pratica de fortificacion* (1598), swiftly followed by a summary (the *Compendio y breve resolucion de fortificacion*, 1613). In England, after Paul Ive, David Papillon made his name with the publication of the concise *Practical Abstract of the Arts of Fortification and Assailing* (1645). In Italy, works appeared in the cities of the north, Cremona, Bologna, and Milan. The most representative figures are Pietro Paolo Floriani, Alessandro Capra, and Pietro Ruggiero, who worked for the king of Spain. The chief engineer of Milan was Gaspare Beretta, diplomat and author of an unpublished treatise. The French, who formed the most significant body of engineers in Europe, were equally busy. They were often remarkable personalities, mathematicians such as Jacques Aleaume, Salomon de Caus, and François Blondel, or renowned hydraulic engineers like Claude Chastillon. Jean Errard (1554–1610) was the author of a seminal work on bastion building *à la française* commissioned by Henry IV, *La fortification réduite en art et démontrée* (1594). The new system was at once absorbed, adapted, and improved in 1629 by Jean Fabre (*Les pratiques… sur l'ordre et règle de fortifier, garder, attaquer et défendre les places*, 1629) and Antoine de Ville (*Les fortifications*, 1638), and later by Blaise François de Pagan (*Les fortifications*, 1645).

The second half of the 17th century experienced a new wave of publications generated by the increasing professionalization of engineering. Experience in the field shored up by a solid grasp of the scientific fundamentals led experts to review the bases of their art and adopt a more scholarly approach. *Les travaux de Mars ou l'art de la guerre* (1671) by Allain Manesson-Mallet, who worked in Portugal and

then in France before becoming "mathematics master to the pages of the little stables" at Versailles in 1670, proved a bestseller throughout Europe. Another notable work was the *Traité des fortifications* (1685) by Hubert Gautier, better known as Gautier de Nîmes.

The iconic contribution, however, remains that of Vauban. It exerted a deep influence on theoretical publications at the end of the 17th century and throughout the 18th, although it was contained in only two works, *Le directeur général des fortifications* (published in The Hague in 1685) and *Le traité de l'attaque des places* (1704). The latter, written on the orders of Louis XIV, describes a rational approach to the siege and remained authoritative fully a century after its author's death. Translated into fifteen languages, including Turkish and Russian, it was a classic for the education of military engineers until the end of the 19th century. But Vauban never codified the art of the fortification, less for strategic reasons than due to consideration for the terrain, which for him was the determining factor in a design. His two volumes however nourished a flood of dissertations.

In the early 17th century, the art of fortification was the almost exclusive prerogative of engineers who published major texts, but in the second half of the century it became a courtly art taught in schools and academies or in the colleges where the young elite of the nobility destined for diplomatic or military service was formed. The mathematicians of the Society of Jesus—Jean Dubreuil, Pierre Bourdin, Georges Fournier, and Claude Milliet de Chales—wrote many handbooks intended for such pupils. The situation was similar abroad. The Jesuit mathematician Andrew Tacquett, who taught at Leuwen, composed a short treatise, *Military Architecture or the Art of Fortifying Towns...* (1672). Sir Jonas Moore, tutor to the duke of York, wrote a convenient handbook, *Fortification, or Elements of Military Fortification* (1673), while for his part college superior Andreas Cellarius from the Palatinate, who was also a geographer, cosmographer, and mathematician, published an *Architectura militaris* (1645). Other literati and scholars composed volumes for the same elite. Pietro Sardi was the author of a treatise, *La Corona imperiale dell'architettura militare* (1618), which was immediately translated into French and German. The theologian Donato Rossetti, master of mathematics to the duke of Savoy, composed a work (*Fortificazione a rovescio*, 1678) that drew on the publications of Pagan and Manesson-Mallet.

106 DES PRINCIPES DE LA FORTIFICAT.

sel de ſes ſujects, mais les Cit oyens eſtans reduits à une loyaute deſirable, ce ſera bien fait de raſer ce baſtimens.

LA FIGVRE N° CLI.

NOus avons icy donné l'exemple d'une Citadelle, avec une Ville ou Forteresſe vis à vis de la Citadelle Mais la Citadelle ſe joindra proprement à une Forteresſe de ceſte façon. En noſtre Decangle nous avons levé les deux Boulevards, marqués A, & B: avons tiré C D, & ſur le milieu de ceſte ligne, du poinct F, avons elevé la perpendiculaire E F; puis aprés nous avons faict l'angle FDE 18°, par ce moyen E F ſera coupée en F, & ce poinct F ſera le centre de la Citadelle, laquelle eſt un Pentagone Royal, ſuivant les reigles du premier livre.

N°170

N°171

Fig u

Mais le Profil de la Citadelle ſera touſjours beaucoup plus fort ou bien au moins autant fort, que celuy de la Citadelle; icy nous avons pris celui des Forteresſes, & avons rempli les Boulevards, pour les faire plus maſſifs. Le reſte ſera compris en la figure. Au devant de la Citadelle on laiſſera une place vaide, à la diſtance de ſix cents pieds au moins, ſans y mettre aucun baſtiment; & la diſtance commence des poincts des Boulevards en la Citadelle. On fera auſſi de telles Forteresſes ſur une montaigne, ou ſur une riviere, pour prevenir tout aventage de ceux de la ville. On peut auſſi, mechaniquement trouver, la plus commode aſſiette de la Citadelle, en faiſant la figure ſur du Papier, & coupant tout alentour puis la remuant jusques à ce que l'aſſiette ſoit trouvée bonne.

QUA-

10.
Fortification model,
(Nicolaus Goldmann,
La nouvelle fortification,
Leyden, 1645, p. 195).

In conjunction with France, northern Europe was another important center of publishing. In Holland, Simon Stevin (1548–1620) of Bruges, mathematician, theorist and military engineer in the service of Prince Maurice of Nassau, founding father of the military academy in Leyden, and above all publisher Hendrik Hondius (1573–1650), mathematician Samuel Marolois, a descendant of French Huguenots, Matthias Dögen (1605–1672), and Adam Freitag (1602–1664) composed fundamental texts on the Dutch art of fortification. In the 18th century, *La Nouvelle Fortification* (1645) by mathematician and architect Nicolaus Goldmann

(1611–1665) went through several critical editions **[10]**. A treatise (*Nieuwe vestingbouw op een matte of lage Horisont*, 1685) by Menno van Coehoorn, the "Dutch Vauban," was translated into English after his death in 1725. Henrik Ruse, in collaboration with Gerhard Melder, published a treatise strongly inspired by Pagan and Freitag (*Praxis fortificatoriæ oder Kunst-gründige Anweisung*, 1664).

In the German states, the more significant publications date mostly to the second half of the 17th century and were not written by engineers. The best known, Wilhelm Dilich, was a historian, geographer, and architect to Maurice of Saxony (*Peribologia oder Bericht von Vestungs gebauen*, 1640). Leonhard Christoph Sturm, who taught mathematics at the academy at Wolfenbüttel, is better known for his editions of Goldman (1721) and Vauban (1708) than for his own *Architectura militaris* (1720). The success of such writings on fortification was often considerable and they were often reissued, as was the case with the treatises by Jean Errard and Antoine de Ville. Between 1631 and 1665, Freitag's *Architectura militaris* enjoyed six editions, in French, German, Dutch, and Latin. *Architectura militaris moderna* by Dögen benefited from virtually simultaneous editions in German, French, and Latin. Marolois was published in French and German, Ruse in German, Dutch, and English. Manesson-Mallet's work, the first compendium on modern military engineering, was published in Paris, as well as in The Hague and Amsterdam. The writings of Mino van Coehoorn and Vauban proved an unparalleled success. Van Coehoorn was published in Dutch, French, English, German, and Russian; the ideas of Vauban were plagiarized in Paris, Amsterdam, and London, and were popularized in particular by Sturm in his *Architectura militaris*, frequently republished in the 18th century.

The circulation of ideas and forms: architecture on paper

THE SUCCESS OF THE MILITARY treatise was only one aspect of the extraordinary rise in architectural literature in 17th-century Europe. The growing output was due partly to the mass distribution of the printed book. The luxurious in-folios printed for wealthy amateurs and scholars of the previous century were gradually being ousted by more accessible formats, including manuals aimed at master masons, carpenters, and stonemasons. Progress in engraving rendered these illustrated publications particularly attractive. That wellspring of the largest publishing enterprise of the Renaissance, Sebastiano Serlio, had grasped perfectly the importance of the "media" such illustrated volumes represented for architecture and, therefore, of the fundamental role of the image in tandem with the text—even if he himself did not fully exploit the resources of copper-plate (the *Extraordinario libro/Livre extraordinaire*, 1551). This novel technique, which appeared at the time of Dürer and developed chiefly in Italy, Germany, and the Netherlands, was used in the 16th century for certain treatises on architecture (Vignola, Androuet du Cerceau, Vredeman de Vries, Dietterlin), and quickly spread with the considerable growth in the print market (books with diagrams, anthologies of prints, broadsheets, etc.). A cultivated public lapped up cityscapes—views of familiar or more remote towns—and indoor scenes, as well as the increasingly accessible works of the great artists, while architectural views of ancient or modern buildings, or even purely imaginary ones, were also popular. The *capricci* of Giovanni Battista Montano (1534–1621), an anthology of his treatise published in 1624 by his pupil Soria, was a great success with a general public hungry for novelty and with architects open to new experiences.[3] The bibliography that Louis Savot added to the end of *L'architecture françoise des bastimens particuliers* (1624) is revealing of this new phase in architectural literature, as it recommends a wide range of publications about construction, technical knowledge, and finishing, as well as collections of patterns (for town residences, palaces, dwellings for every pocket, even doors and mantelpieces). As we have already noted, this was the golden age of the treatise on fortification. Architecture in the proper sense was not far behind: this period also saw the

3. The manuscript treatise in three volumes, acquired by Cassiano dal Pozzo, is today conserved in London at the Soane Museum. During the Seicento, the anthology issued by Giovanni Battista Soria (*Scielta d[i] varii tempietti antichi*, 1624), accompanied by two further volumes (*Diversi ornamenti capricciosi per depositi e altari*, 1625; *Tabernacoli diversi*, 1628), went through many editions.

appearance of the first monographs on the greatest structures (such as St. Peter's and the Escorial). For instance, the hugely ambitious project of the Escorial was described in 1605 by José de Sigüenza, and again in 1657 by Francisco de los Santos.

Practitioners then started proposing their own designs as models. In 1648, Philips Vingboons published his finest plans (followed by a part two in 1674). Borromini devoted a small work to the Oratorio dei Filippini, published posthumously. It was also a time when handbooks for apprentice architects and students of various educational establishments were composed. However, although there was a steady stream of publications on technical subjects (for example, joinery, stereotomy, perspective, ironwork, gardens, hydraulics, machinery, and chimneys), not all the authors were new. As if everything had already been said, a substantial proportion of architecture publishing concerned translations of the great *trattatisti* of the Italian Renaissance (Serlio, Vignola, Palladio, Scamozzi) or Germanic authors (Hans Blum and Wendel Dietterlin), in particular in the field of the orders. Northern Europe and Spain alike freely admitted their debts to the Renaissance.

In spite of its dazzling achievements, Seicento Italy was far from equaling the great authors of the 16th century. In 1615 there appeared in Venice the *Idea della architettura universale* by Vincenzo Scamozzi, a monumental treatise by the last major architect of the Cinquecento. As regards architectural theory and architectural book publication, it was France, and more exactly Paris, that now took center stage. It was here that the principal booksellers and engravers congregated. In much the same way that Vitruvius had dedicated his tome to Augustus, in 1673 Claude Perrault presented to Louis XIV his own translation of *De architectura*, a *translatio studii et imperii* that proclaimed French supremacy.

Northern Europe, England, Spain and Italy

Northern Europe. In the southern Netherlands, the treatise on the orders by Vredeman de Vries, *Architectura*, reissued at the end of the 16th century in German (1581) and Dutch (1598), continued to influence Nordic practitioners, who remained wedded to the ornamental tradition. This text was ransacked by architects in Germany, Switzerland, Denmark, and Sweden, as were those of Hans Blum and Wendel Dietterlin, whose publications were European bestsellers. Blum's treatise (*Quinque columnarum exacta descriptio atque delineatio cum symmetrica earum distributione*), published initially in Latin at Zurich in 1550, was the most widely distributed work in northern Europe, far exceeding Serlio's *Quarto libro* or Vignola's *Regola*. This well-laid out treatise on the orders went through a great number of German editions. As for Dietterlin, in 1593 he provided all northern Europe with models for orders combined with anthropomorphic supports—telamones and caryatids (*Architectura und Austheilung der V. Seüln. Das Erst Buch*, 1593)—followed the next year by a collection of doorways and windows. Some of the doors in the castle at Frederiksborg in Hillerød (c. 1618) were directly inspired by his treatise, even if the proportions of the orders are Serlian. The somewhat extravagant richness of his models spawned the auricular style (*Ohrmuschelstil*) that developed during the Thirty Years' War.

Serlio, who it should be said had inspired both Vredeman de Vries and Blum, remained topical. Following the success of the translations into French, German, and Dutch of the first five books of Serlio by Pieter Coecke, in 1606 Cornelis Claeszoon collected them, reusing the plates and Coecke's translations.[4] This publication was the source of the first English edition of the Bolognese architect's work (1611), and this summa was also published in German at Basel in 1608 and 1609 by Ludwig König.

Nonetheless, Serlio was soon being supplanted by Vignola. In 1617, in the *Premier livre d'architecture*, Jacques Francart proposed models for door- and gateways inspired by Serlio, to which however he added the innovations of Michelangelo and Vignola that he had seen in Italy around 1600. Significantly, in 1602, a new Roman edition of the *Regola* had appeared, complete with plans for entryways by Michelangelo and Vignola, which was presented with these additions by all later editions and by Dutch publications. In northern Europe, a building would declare the modernity of its language *all'antica* through its doorway.

The *Regola*, initially translated into German (1617), was published in a four-language edition in Amsterdam in 1617 (in French, German, Dutch, and Italian), reissued in 1619 and 1620, and in another quadrilingual edition in which the German version was replaced by English, published in 1629. In 1640, an edition in five languages came out, again quickly reprinted in 1642. Vignola remained the only author translated in Russia (1709). Palladio and Scamozzi also had considerable influence. In Holland, the architects of the generation of Philips Vingboons plundered their treatises, which were partially republished. Palladio's Book I on the orders was published in 1646 in a Dutch translation of the French version, singularly altered *al costume di Francia* (*Traité des cinq ordres d'architecture*), that Le Muet had made the previous year. The only translation of the treatise into Dutch (c. 1650), an anonymous version belonging to Vingboons, remained in manuscript. In 1694 in Nuremberg, Johann Jacob Sandrart, following the second part of his treatise devoted to palace architecture and civil building, published the villas of Palladio as illustrations of architecture in the countryside.

But the influence of Scamozzi was undoubtedly even more significant due to the rigor of a system that dovetailed perfectly with the esthetic conceptions of the architects and the intellectual milieus of the period. The translation of Book VI on the orders was published in 1640. In 1658, it was reissued and supplemented by a translation of Book III on the private residence. The splendid edition of 1661 incorporated both these books, as well as engravings of the other *libri* of the Italian version, with copperplates that had been executed for Scamozzi's unfinished books and had been purchased in 1655 from his heirs. The success of Book VI was such that as early as 1657 they were published as pocket primers intended for carpenters and stonemasons, with details of the orders but without text or explanation. The most famous works of Jacob van Campen, such as the house of Constantijn Huygens (father of the famous scientist) his own residence (destroyed in 1876), and the residence of Count Johan Maurits of Nassau-Siegen at The Hague (the Mauritshuis), were inspired by Scamozzian orders. In his turn, he influenced his assistants, Pieter Post in The Hague, Philips Vingboons in Amsterdam, and Arent van's-Gravesande in Leyden.

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4. It was republished in Amsterdam in 1616 by Hendrick Laurensz.

England. In the late 16th century, the gradual emergence of a new architecture based on Vitruvian precepts had been spurred by the publication of the first books of English architecture. After John Shute (*The First and Chief Groundes of Architecture*, 1563), under the Stuarts, Henry Wotton published a treatise on the orders (*Elements of Architecture*, 1624) that met with notable success: it was republished several times and issued in abridged versions. Oddly enough, in 1698 it was translated into Spanish. The appraising of the orders, begun by Shute, is taken a step further here: the immorality of the Corinthian and the rejection of the Composite as licentious were probably an implicit criticism of the works of Inigo Jones, seen as the expression of the burgeoning culture of a "Catholic" court.

Foreign authors were far from excluded. Blum's treatise was the first to be translated in England (1601) and went through twelve editions up to 1690, including no fewer than six between 1668 and 1678. This serviceable text proposed clear models for the orders, simultaneously affirming its freedom with respect to Rome by proclaiming the Tuscan as the German national order. It played a substantial role in the rebuilding of London after the disaster of the Great Fire of 1666, in which the city was almost entirely destroyed. Even if for political reasons England's eyes turned towards northern Europe in preference to Italy, Renaissance Italian theorists were nevertheless rendered into the vernacular. The translation of the first five books of Serlio, prepared by the painter Robert Peake (*The First [to fifth] Booke of Architecture*), was, until the end of the 20th century, the only version available. Moreover, the five-language editions of Vignola, published in Amsterdam in 1617 and reissued countless times since, provided English architects with other models than those of Blum and Dietterlin. But it was Palladio's treatise that left the most durable imprint on English architecture. Inigo Jones (1573–1652), at the time of his second journey to Italy in the suite of Lord Arundel, Thomas Howard, studied at length the works of the master in the Veneto. Once back in England, he deepened his knowledge of the *Quattro libri*, as his abundantly annotated copy of the third Italian edition shows (1601). In fact, only Book I on the orders had been translated into English in 1663, followed by many reprints. But if the treatise was published complete only in the 18th century in a trilingual edition of Italian, French, and English (1715–20), it had long been known through versions in manuscript.

England made Palladio known throughout northern Europe, even before Ottavio Bertotti-Scamozzi (1719–1790) popularized his works and plans on an international scale (1776–83). With Colen Campbell, Palladio's style enjoyed a new vogue in the 18th century. But in *Vitruvius Britannicus*, published in three volumes (1715, 1717, and 1725) in which he reproduced classical English buildings and illustrated his own works, local models were for the first time given an imprimatur.

Spain. After a wave of publications by Spanish authors in the 16th century (Sagredo, Cristóbal de Villalón, Juan de Arfe y Vallafañe), as well as translations of Vitruvius and Italian authors (Alberti, Vignola, and Serlio), the Siglo de Oro saw a steady stream of theoretical texts. A wholly new type of artist began to appear. Architecture, like painting and sculpture, became a science, and could thus be developed, transmitted, and taught.

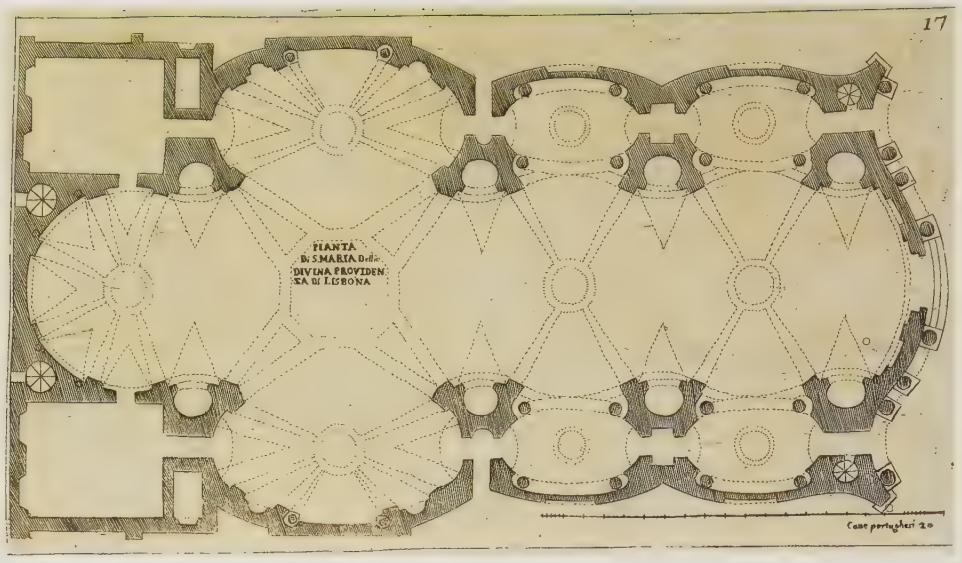
Translations of the Italian treatises continued apace. Vignola, published in Madrid in 1593, was reissued several times (1619, 1653, 1658). Palladio's Book I was

translated in 1625 by Francisco de Praves, who promised the three other books with Daniele Barbaro's Vitruvian commentary. Serlio remained unquestionably the most frequently studied theorist: the various books of his treatise were hugely popular right up until the 18th century in Spain and her overseas possessions. It was the principal source of the *Tratado de la architectura*, published in 1636 by the Belgian Jesuit Jean Charles de La Faille, professor of architecture at the imperial college in Madrid and master of Infante Don Juan José of Austria. Henry Wotton's *Elements of Architecture* was also translated (1698). Yet it was Spanish treatise writers who now came to the fore, older ones like Juan de Arfe y Vallafañe (1535–1603), reprinted in Seville in 1675, but more particularly contemporaries, such as Lorenzo de San Nicolás (*Arte y uso de arquitectura*, 1633–35), reissued up to the 18th century, Simón García, whose *Compendio de arquitectura y simetría de los templos* remained in manuscript (1681), Domingo de Andrade (*Excelencias de la arquitectura*, 1695), and Juan de Torija, who plagiarized Alonso de Vandelvira's treatise on stereotomy (*Breve tratado de todo género de bobedas*, 1661).

The success of the "barley-sugar" column in the ecclesiastical architecture of the 17th century is well established and the triumph of this "Solomonic order" can be gauged from the wealth of commentary it aroused in the theoretical literature. The project for the Escorial had stimulated a great deal of research on the architecture of the Temple of Jerusalem, which was to persist into the following century. The treatise of Juan Bauttista Villalpando and Jerónimo Prado (*In Ezechielem explanationes et apparatus urbis, ac templi hierosolymitani commentariis et imaginibus illustratus...*, Rome, 1596–1604) is doubtless the most famous such publication, although there was also the *Arquitectura civil, recta y obliqua* (1678) by Juan de Caramuel and Juan Andrés Ricci's *Epitome architecturæ de ordine salomonico* (1663), which remained unpublished.

Italy. At the dawn of the 17th century, architects continued to be guided by the great treatise writers Serlio, Vignola, and Palladio, as well as Barbaro, the author of the most recent commentary on Vitruvius. Vignola's *Regola* in particular had been reprinted innumerable times with additions since 1602. One year before his death, Vincenzo Scamozzi published his own monumental tome, *L'idea della architettura universale* (1615), representing twenty-five years' work. Following in the wake of Alberti and Barbaro, the text tackled fundamental architectural questions. Book VI, with which the second volume of the *Idea* opens, remained topical. Its hierarchy of the orders, placing the Composite between the Ionic and the Corinthian, was taken up by many theorists. It was also at this time that conspectuses on architecture appeared, such as the handbook of Giovanni Branca (*Manuale di architettura breve e risoluta prattica*, 1629) Giuseppe Viola Zanini's treatise (*Della architettura*, 1629), his text is hardly ground-breaking, seeming a pedestrian heir to the Venetian *trattatisti*, although it was reissued in 1677 and 1678.

In the first half of the Seicento, architecture was chiefly the bone of more general contention. Some theorists, unlike Scamozzi, who advocated the scientific and mathematical basis of the art of building, subordinated architecture to painting. These included Giovanni Paolo Lomazzo (*Idea del tempio della pittura*, 1590), Federico Zuccari, founder of the Accademia di San Luca,[5] and Giovan Pietro Bellori (*L'idea del*



11.
Guarino Guarini,
plan for the church of S. Maria della Divina Provvidenza, Lisbon (*Architettura civile*, Turin, 1737 pl. 17).

pittore, dello scultore e dell'architetto scelta delle bellezze naturali superiore alla Natura, published with the *Vite de' pittori, scultori e architetti moderni*, 1672).

In France, on the contrary, architecture was affirmed as a scientific discipline in its own right within an institutional framework, the Académie d'Architecture, founded in 1671. The great theorists were no longer Italian, and Serlio, Vignola, Palladio, and Scamozzi were succeeded by Roland Fréart de Chambray, Abraham Bosse, François Blondel, and Claude Perrault. This did not mean that there were no Italian texts at all, and they continued to be promoted in the ambit of the religious orders. Protagonists in the Counter Reformation include key figures such as the Jesuit Andrea Pozzo, author of a treatise on perspective (*Perspectiva pictorum et architectorum*, 1693–1700), and above all the Theatine priest, Guarino Guarini. Although *Architettura civile* was only published in 1737 **[11]**, drawings of his plans had appeared in Turin in 1686, three years after his death (*Disegni d'architettura civile et ecclesiastica*), on the initiative of the Theatines of Turin, a wholly graphic collection that gave a foretaste of the consummate originality of the treatise. Though this publication popularized Guarini's works and his conception of the orders, it deferred the complete publication of his treatise by almost fifty years. International projects concerning civil as much as religious architecture were widely commissioned. Borromini, whose *Opus architectonicum* (the Oratorio dei Filippini) appeared only in the 18th century, had deliberately chosen to issue illustrations of his plans with accompanying notes, Vignola's *Regola* being the most notable precedent in this regard.

The vast majority of publications at this time focused on practice and functionality. These were vade mecums or didactic handbooks, such as the multi-disciplinary work by the Milanese engineer Pietro Antonio Barca (*Avvertimenti e regole circa l'architettura civile… e architettura militare*, 1620), the *Architettura civile ridotta a metodo facile e breve* (1675) by Costanzo Amichevoli (a pseudonym of the Jesuit Francesco Eschinardi), directed at pupils of the Collegio Romano, the *Utriusque architecturæ compendium* (1688) by the Neapolitan Dominican Maria Napoli, and the

5. In 1607, he published a lecture pronounced at the Academy in 1594, *L'idea de'pittori, scultori, e architetti.*

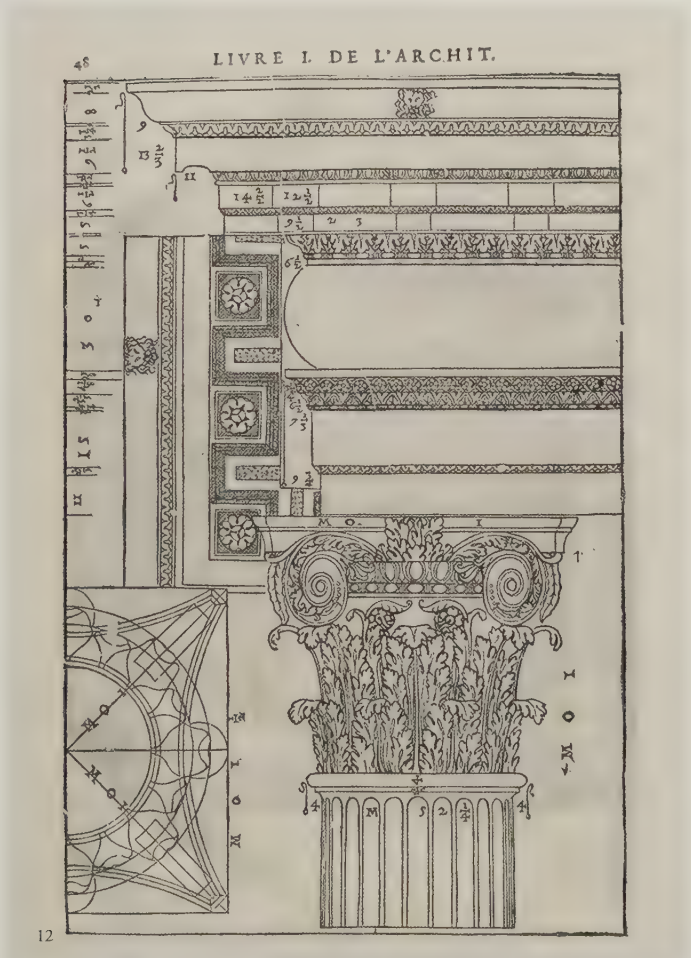
Instruttioni architettoniche pratiche by the Florentine Giuseppe Leoncini (1679) written for aspiring architects. The Accademia di San Luca gave currency essentially to Vignola's orders, as testified by the manuscript treatise of Carlo Fontana (*Libro d'architettura civile*, 1694), who had taught there at the end of the 1630s. Architects demanded pertinent models adaptable to every context.

French supremacy

In terms of both publishing and theory, it was France that now played the leading role. It was here, and more particularly in Paris, where booksellers and renowned engravers had set up shop, that the most important writings on architecture appeared.

The ultramontane legacy was gradually being digested. In the first half of the 17th century, translations of the two great Italian masters, Palladio and Vignola, came out. In 1645 the former was "*habillé à la française*" by Pierre Le Muet, who limited himself to translating Book I on the orders, embellished by many specifically French considerations. More faithful and more complete was the translation by Roland Fréart de Chambray, who in 1650 laid before the public the entire Italian text complete with the original plates **[12]**. Vignola was still more in vogue: following several multilingual Dutch publications (1617, 1619, 1620), in 1632 a purely French *Reigle*

12.
Andrea Palladio,
Composite capital and entablature (*Les quatre livres de l'architecture...: mis en françois*, Paris, 1650, p. 46).
13.
Vignola,
Doric capital and entablature (Pierre Le Muet, *Règles des cinq ordres d'architecture de Vignolle...*, Paris, 1632, p. 23).



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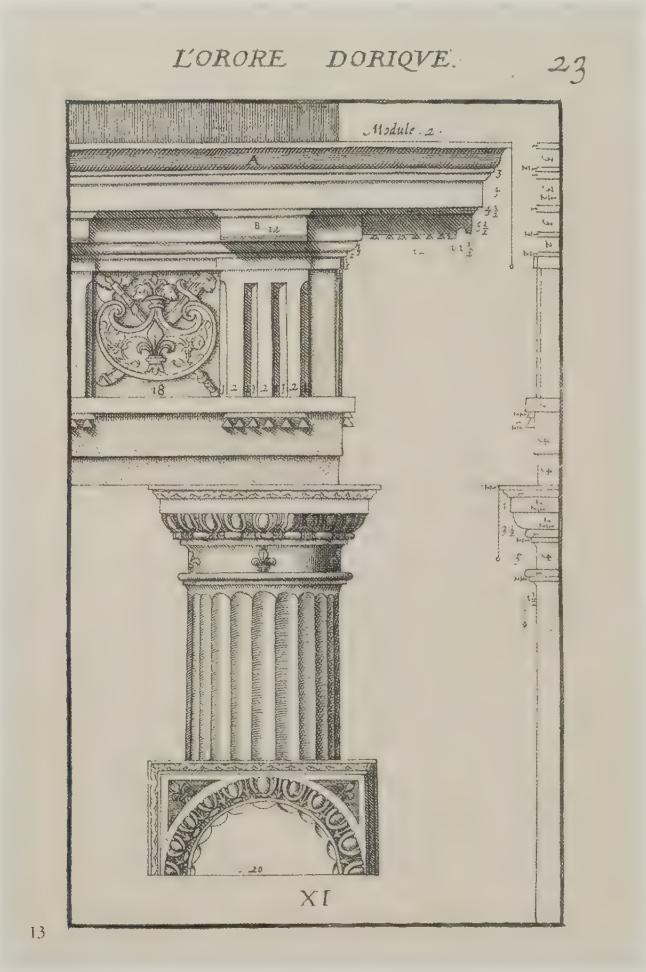

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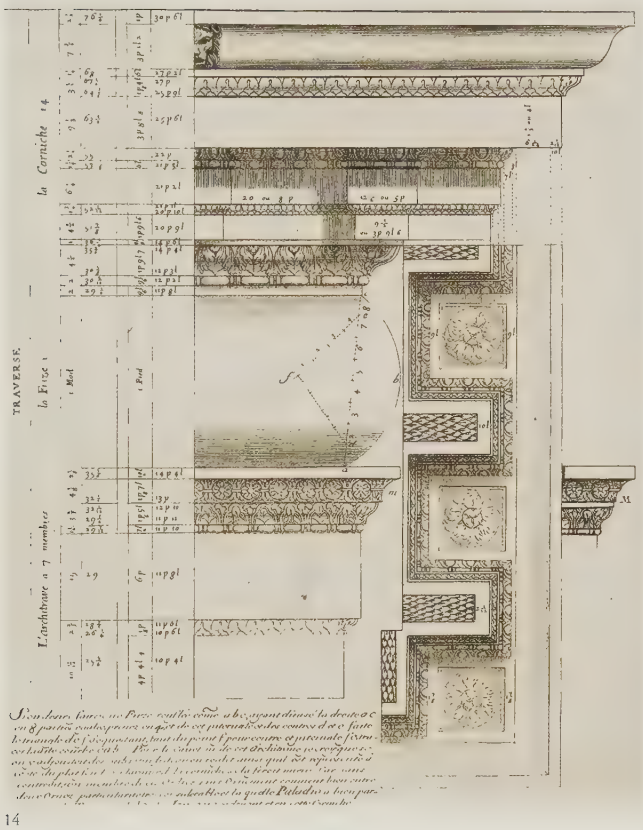
by Pierre Le Muet came out in Paris **[13]**. It had been preceded shortly before by that of Pierre Firens (undated), who however took no account of the additions in the Roman 1602 edition. As for Scamozzi, read exhaustively in abbreviated versions in the Low Countries, he was published only in 1685, edited by Augustin Charles d'Aviler. He did however have his adepts, such as Jacques Lemercier in the interior of Saint-Roch, or Pierre Puget, who admitted being inspired by the Italian in his projects for the Arsenal at Toulon.

During the Renaissance, the models developed by the Italians inspired ideas on the orders in France: the Serlian repertory had been explored by Jean Goujon, Jean Bullant, and, to a certain extent, by Philibert De l'Orme in their engravings. Bullant's *Reigle* and De l'Orme's *Premier tome* were moreover still available at the beginning of the 17th century, the former being reissued in Paris in 1619, under the auspices of Salomon de Brosse, and then in Rouen in 1647, while the latter came out in 1603, 1626 in Paris and in Rouen in 1648. Curiously enough, the Serlian orders resurfaced in Julien Mauclerc's treatise of 1600 (La Rochelle), reprinted by Pierre Daret in Paris in 1648, but following a version the German Hans Blum had provided in 1550; it was the same with a guide to the orders appended to Mathurin Jousse's treatise on carpentry in 1627, republished several times up to the 18th century. Blum's plates, which had been engraved in 1562 in Lyon, "reappeared" in the hands of François Demasso a little before 1650.

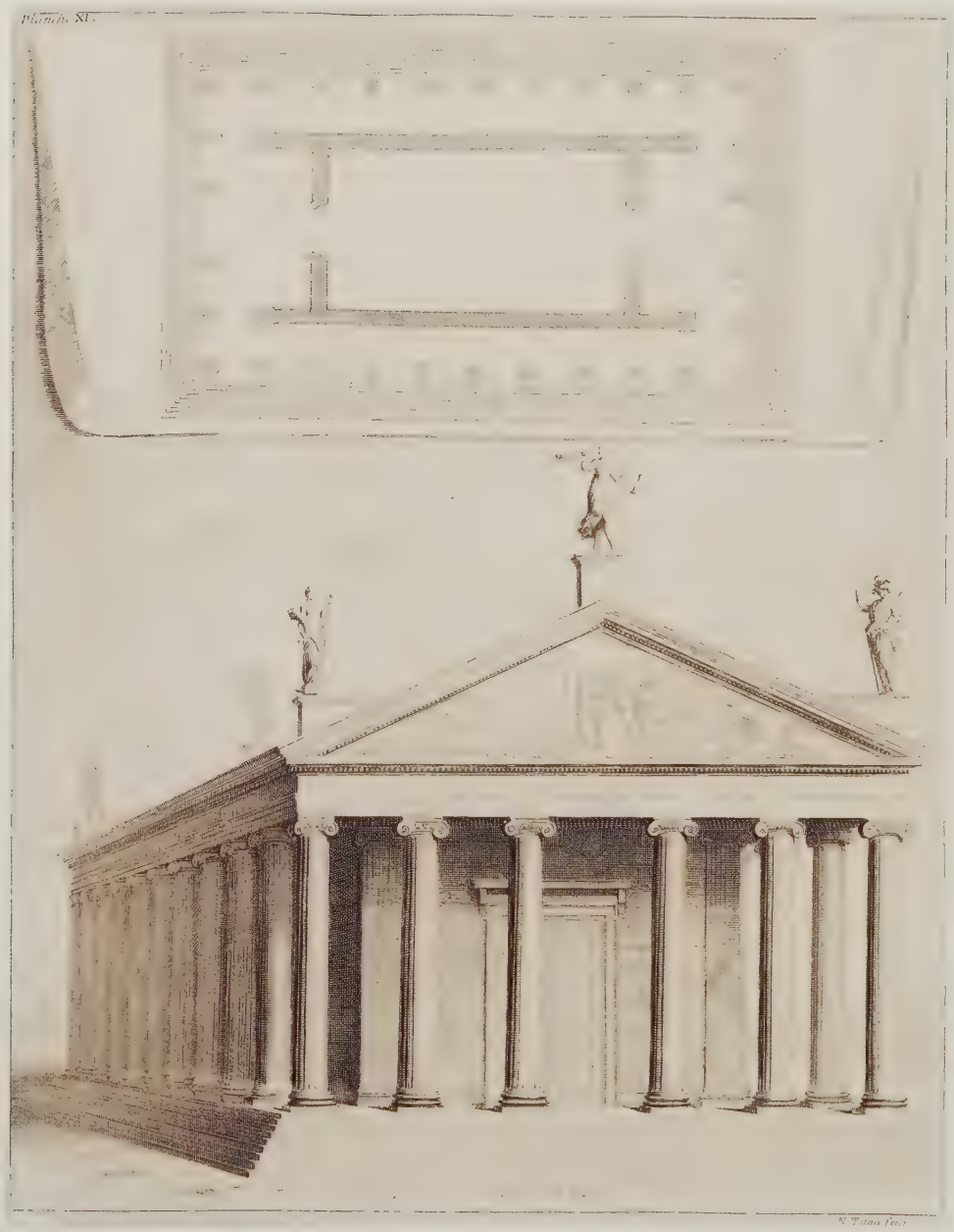


14

Such references nevertheless remained marginal compared to the influence exerted on theory by Palladio, Vignola, and Scamozzi, and the orders of the three great Renaissance Italians—the same ones Chambray had noted in his famous *Parallèle de l'architecture antique et de la moderne* (1650)—still formed the basis of the synthesis undertaken by Claude Perrault in his *Ordonnance des cinq espèces de colonnes* (1683). But for the spokesman of the *Intelligents*, Palladio remained the best among the Moderns for his orders, a synthesis of the most beautiful ancient models and for his flawless reading of Vitruvius, much to be preferred to Scamozzi, Vignola, or Serlio. The fledgling Académie d'Architecture had furthermore devoted its earliest efforts to the study of Palladio's exposition. The orders admirably engraved by Abraham Bosse in his two treatises published in 1664 (*Traité des manières de dessiner les ordres*, *Des ordres de colonnes*) are of Palladian inspiration **[14]**.

All the same, the legacy of the Italians, ancient and modern, had unquestionably been absorbed: architectural knowledge was henceforth to be an affair of state. The theorists, from Chambray to Perrault, practiced under the explicit aegis of the ruling powers, whether they were employed as Surintendants des Bâtiments—Sublet de Noyers at the time of Richelieu and Colbert under Louis XIV—or at the Académie d'Architecture, created in 1671 with the acknowledged aim of defining standards for the art of correct building—that is, of architecture *à la française*—for the greater glory of the king.

Accordingly, the academicians, keenly awaiting the publication of Perrault's translation with accompanying notes of Vitruvius (1673), devoted their time to the study of the principal French treatises (De l'Orme, Bullant, Androuet du Cerceau) and to the *libri* of Palladio. Pondering architectural esthetics, they would formulate the doctrines of the Beautiful (the *Beau*), as expressed in particular in the *Cours d'architecture* (1675–83) of François Blondel, director of the academy. Academic teaching also lay behind the pages André Félibien devoted to architecture in his *Principes de l'architecture* (1676). It was for similar reasons that Antoine Desgodets was dispatched to Rome with the king's support to measure and survey precisely the principal ancient monuments, since these had been dealt with only summarily in the Italian treatises, even that of Palladio. On his return, Desgodets published a superb collection, *Les édifices antiques de Rome dessinés et mesurés très exactement* (1682), henceforth destined to become the reference throughout Europe.



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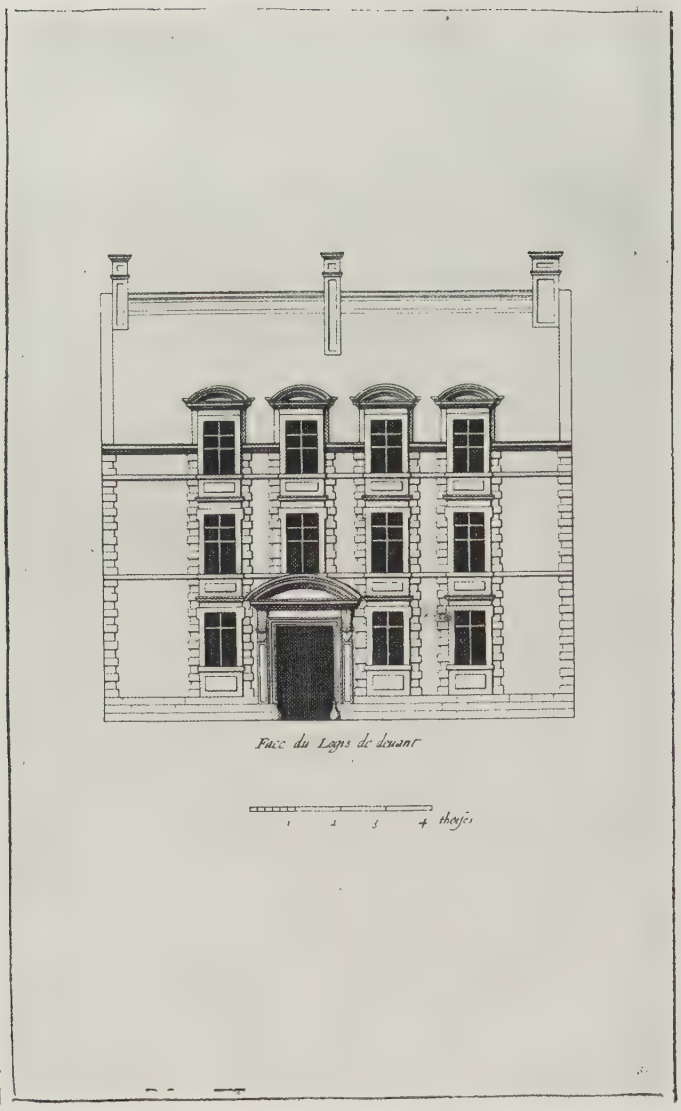
14.
Abraham Bosse,
Composite entablature,
(*Traité des manières de dessiner les ordres...*, Paris, 1664/1665, pl. XXXVIII).
15.
Claude Perrault,
temple with ionic peristyle,
(*Les dix livres d'architecture de Vitruve*, Paris, 1673, p. 65).

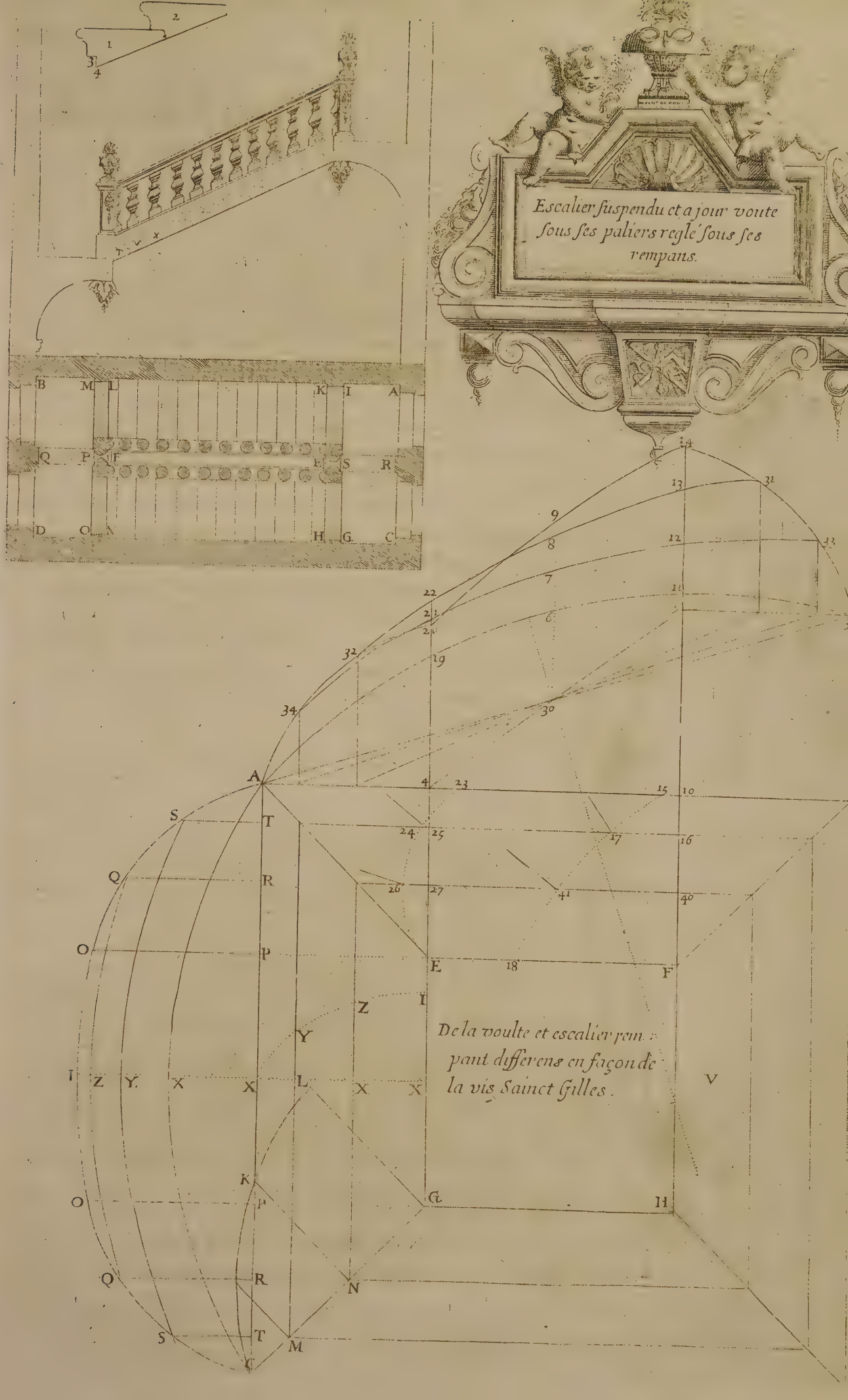


16 |

16.
Pierre Le Muet, façade, (*Manière de bien bastir pour toutes sortes de personnes*, Paris, 1647, p. 57, 61).
17.
François Derand, stairway, (*Architecture des voûtes*, Paris, 1643, p. 447).

In the notes to his remarkable edition with commentary of Vitruvius (1673, 1684), Perrault openly proclaims the superiority of the Moderns over the Ancients: not only has Vitruvius been surpassed, but also—and despite the advocacy of Fréart de Chambray—Palladio, Scamozzi, Vignola, and Serlio **[15]**. The *Ordonnance des cinq espèces de colonnes* published in 1683, a "supplement to what was not sufficiently treated by Vitruvius" (from the *Epître*), enshrined the preeminence of the practitioners of the century of Louis XIV over the theorists of the Renaissance, establishing definitively the "probable" and "certain" rules of architecture in a synthesis of Vitruvius, the most acceptable Roman antiquities, and the best *trattatisti*, all under the umbrella of an especially French tradition and sensibility.

The arguments behind Perrault's claims did not hinge on the problem of the orders. Preoccupied essentially with effectiveness, France in the 17th century was particularly rich in publications dealing with far more concrete, indeed even technical, interests. The meditations of amateur esthetes were attended by the material concerns of builders at whom pattern-books and technical treatises were aimed. In 1623, Pierre Le Muet published the first edition of his *Manière de bâtir pour toutes sortes de personnes* (1623), a collection of plans and elevations for residences designed for urban plots, from the most modest house to small private mansions **[16]**. Limiting his


Escalier suspendu et a jour voute sous ses paliers regle sous ses rempans.
De la voulte et escalier rampant differens en façon de la vis Sainct Gilles.

concerns to urban architecture, Le Muet took up the idea of the sixth book of Serlio that remained unpublished, *Delle habitationi de tutti li gradi degli huomini*, which he knew from the manuscript now preserved at Columbia University in New York, which was at that time in France. The second part of the treatise, added in 1647 and sold as a separate volume, is an anthology of the architect's works engraved by Jean Marot, the range of plans suggested being supplemented and enriched by three Paris residences (Maison Tubeuf, Hôtel Coquet, and Hôtel d'Avaux) and three châteaux (Pont-sur-Seine, Tanlay, and Chavigny). In much the same spirit, Louis Savot issued *L'architecture françoise des bastimens particuliers* (1624), which though not illustrated provided private individuals with a mass of practical advice as regards building, in order "to extricate decent people from the clutches of contractors and workmen," as François Blondel remarked in his presentation of the reissue of the book in 1673 (another was to follow in 1685). In 1691, Pierre Bullet presented a new guide to construction, significantly entitled *Architecture pratique* that tackled masonry and carpentry, but also (like Savot) measurements, estimates, and the "usages concerning the easements and revenues accruing to buildings." More ambitious were the models to be found in Antoine Lepautre's *Œuvres d'architecture*, which contains plans for châteaux or country houses of stately dimensions, the ones most influenced by the Italians being extremely original. Other plans for country residences were proposed by Jacques François Blondel in two volumes entitled *De la distribution des maisons de plaisance et de la décoration des édifices en général* (1737–38).

In the wake of Jacques Androuet du Cerceau's *Plus excellents bastiments de France*, engraved anthologies of buildings were particularly popular. The series by Jean Marot, Jean Mariette, and Antoine Aveline depict the finest constructions of the time. The four sturdy volumes of *Architecture française, ou Recueil des plans, élévations, coupes et profils* by Jacques François Blondel, published from 1752 on and presenting detailed documentation on the churches, palaces, and châteaux of Paris and its surroundings, amounted to a treatise. Other collections were specialized in their aims, limited to altars or fireplaces, like those of Jean Barbet, with engravings by Abraham Bosse (*Livre d'architecture, d'autels et de cheminées*, 1633) and of the Fleming Pierre Collot (*Pièces d'architecture où sont comprises plusieurs sortes de cheminées, tabernacles*, 1633), or to doorways, like the short text by Alexandre Francine, an Italian settled in France, the *Livre d'architecture* (1631).

Yet the most significant texts were the properly technical treatises. Philibert De l'Orme had blazed the trail with his *Nouvelles inventions* devoted to building frames, the *Premier tome* of which revealed the secrets of complex stonework. The torch was taken up by Mathurin Jousse in the *Secret d'architecture* (1642) on stone-dressing and the *Théâtre de l'art de charpentier* (1627) on joinery (republished several times up to 1751); in 1627, the same author added a treatise on ironwork (*La fidèle ouverture de l'art de serrurier*). Stereotomy was also the subject of a book by the Jesuit father François Derand, *L'architecture des voûtes* (1643), and was dealt with in a very advanced mathematical approach by Girard Desargues and Abraham Bosse (*La pratique du trait à preuves de Mr Desargues Lyonnois*, 1643). The fundamentally geometrical aspects of stereotomy were of interest above all to specialists such as Philippe de La Hire, son of the painter Laurent de La Hire, who succeeded François Blondel at the academy in 1687, teaching essentially the theory of stone-cutting until

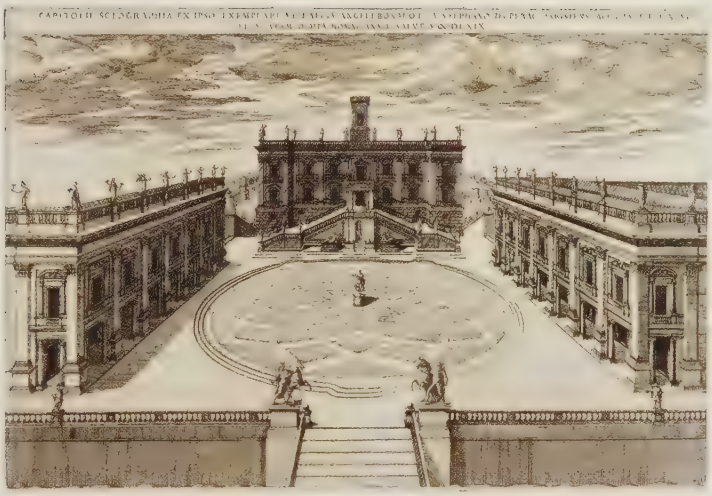
1713. In 1737 and 1739, the tradition of stereotomy and timber-framing remained the inspiration behind a monumental treatise on vaults by Amédée François Frézier, *La théorie et la pratique de la coupe des pierres et des bois pour la construction des voûtes... ou Traité de stéréotomie*, republished in 1754–69.

The art of the garden, inextricably linked to French architecture of the Grand Siècle, was also well illustrated by several works written either by gardeners or amateurs: thus in 1629 in Geneva the physician Daniel Loris published a collection of plantings, the *Trésor des parterres de l'univers*. As for André and Claude Mollet, gardeners to kings Henry IV and Louis XIII, they respectively proposed the designs of *Le jardin de plaisir, contenant plusieurs desseins de jardinage* in 1651 and the *Théâtre des plans et jardinages* in 1652 (several reprints); in 1638, Jacques Boyceau de La Barauderie, also in the service of the Bourbons, produced a *Traité du jardinage selon les raisons de la nature et de l'art*.

A sign of the times, it was now French theorists who asserted authority throughout Europe. The edition of Vignola brought out by Le Muet spawned numerous versions, being translated into Dutch, German, and English. His version of Palladio was also translated into Dutch and English. The *Manière de bâtir* with its *Augmentations* (1647) was published and reprinted in London (1670, 1675, 1679). Fréart de Chambray's *Parallèle* was translated into English by John Evelyn in 1665 and was read attentively in Italy too, as an anonymous Italian manuscript written between 1699 and 1700, today preserved in Rome (Biblioteca Angelica), attests. In 1711 The *Recueil historique de la vie et des ouvrages des plus célèbres architectes* de Jean-François Félibien des Avaux was adapted into German by Paul Jacob Marperger (*Historie und Leben der berühmtesten europäischen Baumeister*). Even when not translated, such texts long remained a reference. Perrault on Vitruvius was unequalled until the 18th century and one would have to await the commentaries of Berardo Galiani (*L'architettura*, 1758) and Francesco Milizia (*Principi di architettura civile*, 1781) for works of comparable impact.

2 Italian Architectural Rhetoric

Rome, the great workshop of the Baroque



1

THE TRANSITION from one century to the next has in itself little impact on the evolution of the arts. In 1600 in Rome, nothing seemed poised to upset the language and style that the Renaissance and its Mannerist mutations had imposed in the course of the previous century. In fact, the lessons and models of two major masters, Michelangelo and Palladio, continued to leave their stamp on new creations. Michelangelo had died with several ongoing sites of capital importance unfinished: the Piazza del Campidoglio **[1]** and St. Peter's Basilica. It was in their shadow that the masters of the Roman Baroque, born around 1600, grew up and were trained. At the Capitol, the frontage of the Palazzo del Senatore was only completed in 1602; the work on Palazzo Nuovo was halted for nearly forty years and finished only after 1650. As for the completion of St. Peter's and the arrangement of the square, they occupied the entire period. The Florentine master's work permeated the decorative repertory of the Baroque age: the niched columns from the Ricetto in the Laurentian Library pepper the façades of the churches of Sant'Andrea della Valle, Santa Maria in Campitelli, and even, as late as 1732, Santa Maria dell'Orazione e della Morte by Ferdinando Fuga. Embedded pediments as at the Porta Pia surface in many churches, perhaps through the intermediary of the Gesù; half-pediments connected by a garland crown SS. Vincenzo e Anastasio. The peculiar structure of the frontages to the Capitol (Colossal order and small columns to the sides of the openings to the ground floor) had significant repercussions even on the greatest masters (San Carlo alle Quattro Fontane, Sant'Andrea al Quirinale).

The influence of Palladio, if less obvious, remained in any event rather limited in Rome. If the classical purity of the master of Vicenza hardly squares with the commonly held idea of Baroque exuberance, Rudolf Wittkower, in a famous essay, outlined a certain number of points in common between the work of Palladio and Bernini.[1] Certain details in the buildings of Borromini may have been inspired by palaces in

1. *Palladio e il palladianesimo*, Turin: Einaudi, 1995, pp. 27–51.

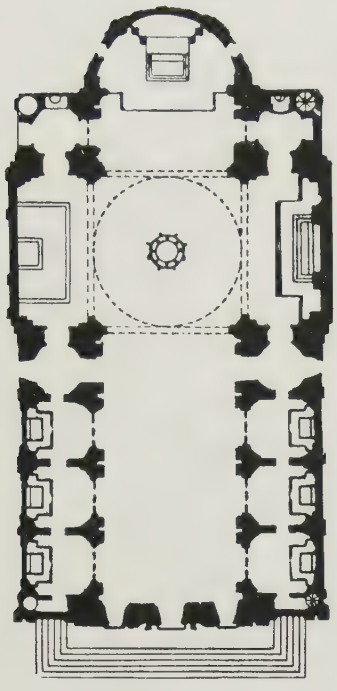
2

Vicenza. The arcades with serlianas in the Villa Mondragone, Frascati, by Giovanni Vasanzio (c. 1617), or those of the interior elevation of Sant'Ignazio by Carlo Maderno **[2]** and perhaps Domenichino (c. 1626) demonstrably evoke the solution adopted at the basilica at Vicenza. The *Quattro libri* (Venice, 1570), republished four times up to 1642, were in every Roman library. Moreover, a frontage of church like that of Santa Francesca Romana on the Forum by Carlo Lambardi (1615) presents an articulation of two orders of different size eminently comparable to the Venetian formula at San Pietro di Castello, San Francesco della Vigna, or the Redentore—proof that the churches of Palladio, although they did not actually feature in the treatise, were not unknown in Rome.

From Mannerism to Baroque

A further continuity can be discerned: that of the Catholic Counter-Reformation, with Rome as its geographic and spiritual center. The great movement to restore the architecture and urban fabric of the Italian city in effect owed a great deal to the new religious orders, the majority of which had been founded in the 16th century: the Society of Jesus set up by St. Ignatius Loyola in 1534 and that of the Theatines instituted by St. Gaetano da Thiene and Giampietro Carafa in 1524, were both confirmed by Paul III in 1540. The Oratory, although not an order in the strict sense but a congregation of lay clerks, was created in 1561 by St. Philip Neri and approved in 1575 by Gregory XIII. Jesuits, Theatines, and Oratorians all built vast complexes which, in addition to the church, included many outbuildings (such as housing for the members, seminaries, and colleges). Through the architectural unity of these ensembles, they affirmed the prestige of the religious community. Based on archetypal establishments built under the aegis of Saint Charles (Carlo) Borromeo around Milan

1.
Étienne Dupérac,
View of the Capitol in Rome.
Engraving. Graphische Sammlung Albertina, Vienna.
2.
Church of Sant'Ignazio, Rome, interior.



3

3.
Vignola, church of the Gesù, Rome, plan.
4.
Giacomo Della Porta, church of the Gesù, Rome, façade.
5.
Sant'Andrea della Valle, Rome, façade.
6.
Martino Longhi the Younger, SS. Vincenzo e Anastasio, Rome, façade.
7.
Carlo Rainaldi, Santa Maria in Campitelli, Rome, façade.

(the Seminario Maggiore, the Collegio Elvetico in Milan, the Collegio Borromeo in Pavia), achievements as remarkable as the Jesuit college (Collegio Balbi) in Genoa and in the capital of Lombardy itself, the Collegio di Brera and Collegio di Sant'Alessandro and the Scuole Arcimbolde, rose up, veritable palaces with *cortile* and banks of loggias. In this field in Rome, where the Jesuits and Oratorians built sizable complexes, the most extraordinary building is certainly Francesco Borromini's Collegio di Propaganda Fide.

Vignola and the churches of the Counter-Reformation. For the churches that lay at the heart of these new institutions, architects were happy during the Seicento to redeploy models adopted during the previous century, albeit in a creative way that demonstrated their talent. They sometimes indulged in ingenious alternatives or else adapted their designs to local demands or the specific requirements of their patrons. The unimpeachable template in this respect was the Gesù in Rome, a church built thanks to Cardinal Alessandro Farnese by Vignola and Giacomo della Porta in collaboration with a member of the society, Father Giovanni Tristano. Its spatial model was a response to new imperatives imposed by the spiritual revival of the Counter-Reformation: the vast nave without aisles flanked by chapels, the relatively short transept, and the choir limited to a simple apse created a unified and coherent space that lent itself to preaching [**3**]. Thanks to the discipline of the order, its lessons were immediately taken up by Jesuit churches in Mantua, Piacenza, Cremona, Imola, Faenza, and Bologna, and even in Sicily.

But the Gesù's most prestigious counterparts are to be found in Rome. Santa Maria in Valicella (the Chiesa Nuova), the church of Oratorians, begun in 1575, and Sant'Andrea della Valle, the mother church of the Theatines, built from 1591 by the order's architect, Francesco Grimaldi, reproduce its plan almost line by line. For the Barnabites, Rosato Rosati varied the type, giving San Carlo ai Catinari an elongated Greek cross plan (c. 1612). In the same way, church frontages took as their starting point the sophisticated effects of della Porta's elevation created by projections of double pilasters and columns that throw the central range outwards [**4**]. The majestic façade of Sant'Andrea della Valle, whose construction involved several architects and which was completed with the sculptural decoration in 1666, has even greater monumentality [**5**]. Gradually, frontages became increasingly spectacular. At SS. Vincenzo e Anastasio (1650), Martino Longhi the Younger framed the entrance with a triplet of columns so close together they resemble a cluster, echoed on the upper reaches where they support three pediments encased one in the other [**6**]; at Santa Maria in Campitelli, Carlo Rainaldi juxtaposed strongly projecting columns with others engaged in niches to create a striking effect of contrast (started after 1663) [**7**]. The frontage of San Marcello al Corso, erected by Carlo Fontana in 1682–83, curves in a spectacular concave movement, opposed by the two successive projections of the ground floor, and highlighting the projecting doorway [**8**].

The Jesuits adapted the model to the various countries they wanted to expand into. From the very start, the Society of Jesus surrounded itself with competent individuals able to come up with projects or oversee construction sites. The most famous of these, Andrea Pozzo (1642–1709), was not only an architect but also a painter, a specialist in *quadratura* (illusory architecture painting) and the creator of temporary decorations or

LEXANDER CARDINALIS FARNESIVS

4

ALEXANDER SEPT. P. M. S. ANDREAE APOSTOLO

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6

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8.
Carlo Fontana,
San Marcello al Corso, Rome, façade.
9.
Giovanni Battista Soria,
Santa Caterina da Siena a Magnanapoli, Rome, façade.

8

ephemeral structures.[2] Orazio Grassi (1583–1654), in addition to being an astronomer and renowned theologian, worked at Sant'Ignazio, the church of the Collegio Romano (1626–50), financed by Cardinal Ludovico Ludovisi to house his tomb and that of his uncle, Pope Gregory XV, who had recently canonized St. Ignatius. The church was to be one of the most remarkable achievements of the era. The plan proposed by Grassi could of course only be a variation on the model of the Gesù, but in it the side chapels intercommunicate and are articulated by columns inserted in the arches and passageways. The architect optimized the space of the prototype for even greater liturgical effect. On the other hand, his project for the frontage over three levels, a type more frequently found in the countries of northern Europe (as at the church of Saint Charles Borromeo in Antwerp, the first version being due to Pieter Huyssens), was never adopted. The Jesuit church of San Fedele in Milan, designed by Pellegrino Tibaldi

2. Pozzo also composed a work in two volumes, the *Perspectiva pictorum et architectorum* (Rome, 1693–1700), translated into no fewer than eight languages.

from 1569 on, supplied a further model whose plan presents alternatives compared to Vignola's: still more unitary, it is characterized by the absence of side chapels and transept. It had many offspring in northern Italy, at Sansepolcro (1653–81), Arezzo (1664–86), Fidenza (1707–22), and Savona (1714–42). In the same way, its frontage is distinguished from the Roman type by two superposed levels of equal breadth; Santa Maria dei Miracoli, in Sarrono not far from Milan, is another example.

In Rome, the type is represented by the church of San Luigi dei Francesi; at the beginning of the 17th century, the model was readily adopted for smaller churches, often located on a hill to give them a more imposing feel: San Sebastiano fuori le Mura, reconstructed to plans by Flaminio Ponzio, Santa Caterina da Siena a Magnanapoli **[9]**, and San Gregorio al Celio, whose façades are by Giovanni Battista Soria, as well as the church of SS. Domenico e Sisto. In the 18th century at Santa Maria Maddalena (1732–37), Emmanuel Rodriguez dos Santos and Domenico Barbiani unveiled a very Baroque version, complete with concave frontage and abundant ornamentation.

Palaces and villas. Continuity was also evident in civil architecture. The Palazzo Farnese, a digest of the history of Cinquecento architecture, started in 1515 and completed in about 1589, provided a prototype for the urban home. Its monumental but sober elevation, enlivened solely by the bays, the rows of rustication, and the relief of the doorway, develops a wonderfully flexible formula **[10]**. The number of spans or levels could be adapted to the owner's financial means and to the size of the plot; the windows might be endowed with embellishments less expensive than orders; and finally, its magnificent smooth brick facing might easily be replaced by a simple outer coating. Hence, the majority of the greater Roman palaces erected in the late 16th century and the 17th on Via del Corso or on the great squares in Rome (Piazza Colonna, Piazza del Quirinale, Piazza del Gesù) were inspired by Antonio da Sangallo the Younger's façade. This was the case at the Palazzo Aldobrandini-Chigi (by Carlo Maderno), the palace rebuilt after 1624 by the Prince of Venafro to plans by Maderno (today, the Palazzo Almagià), the Palazzo Ruspoli built by Bartolomeo Ammannati for the Rucellai, the Palazzo Albani built between 1587 and 1590 by Carlo Fontana, and Palazzo Altemps, converted by Martino Longhi the Elder after 1578. The Lateran Palace, built by Domenico Fontana for Sixtus V, was surely the most imposing alternative **[12]**.

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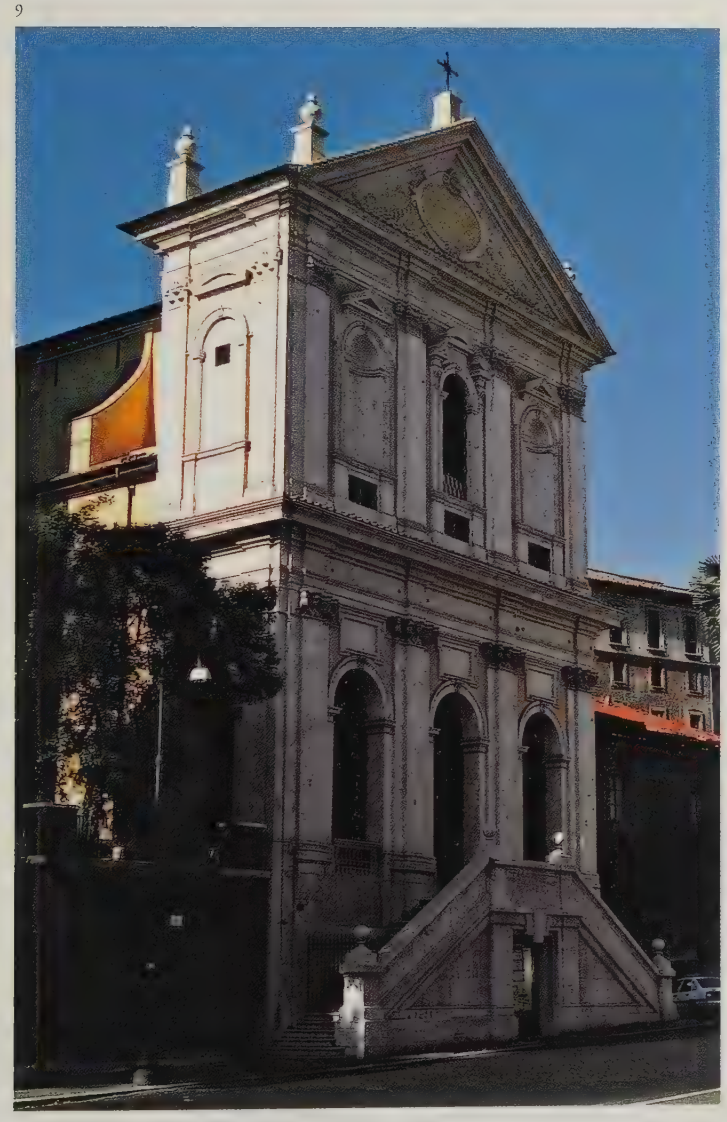

The plan of the Palazzo Farnese, with its central courtyard, was also often copied **[11]**; the great *salone* of the *piano nobile*, which rises over two levels, was also much emulated (Villa Medici, Palazzo Barberini). Nevertheless, topographic constraints could result

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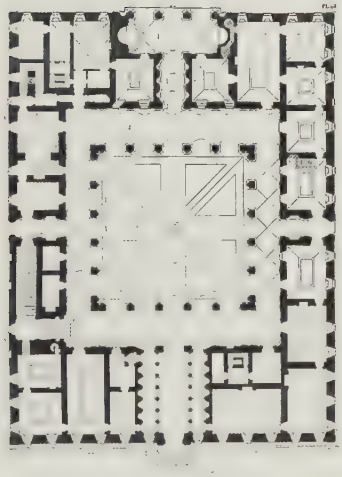
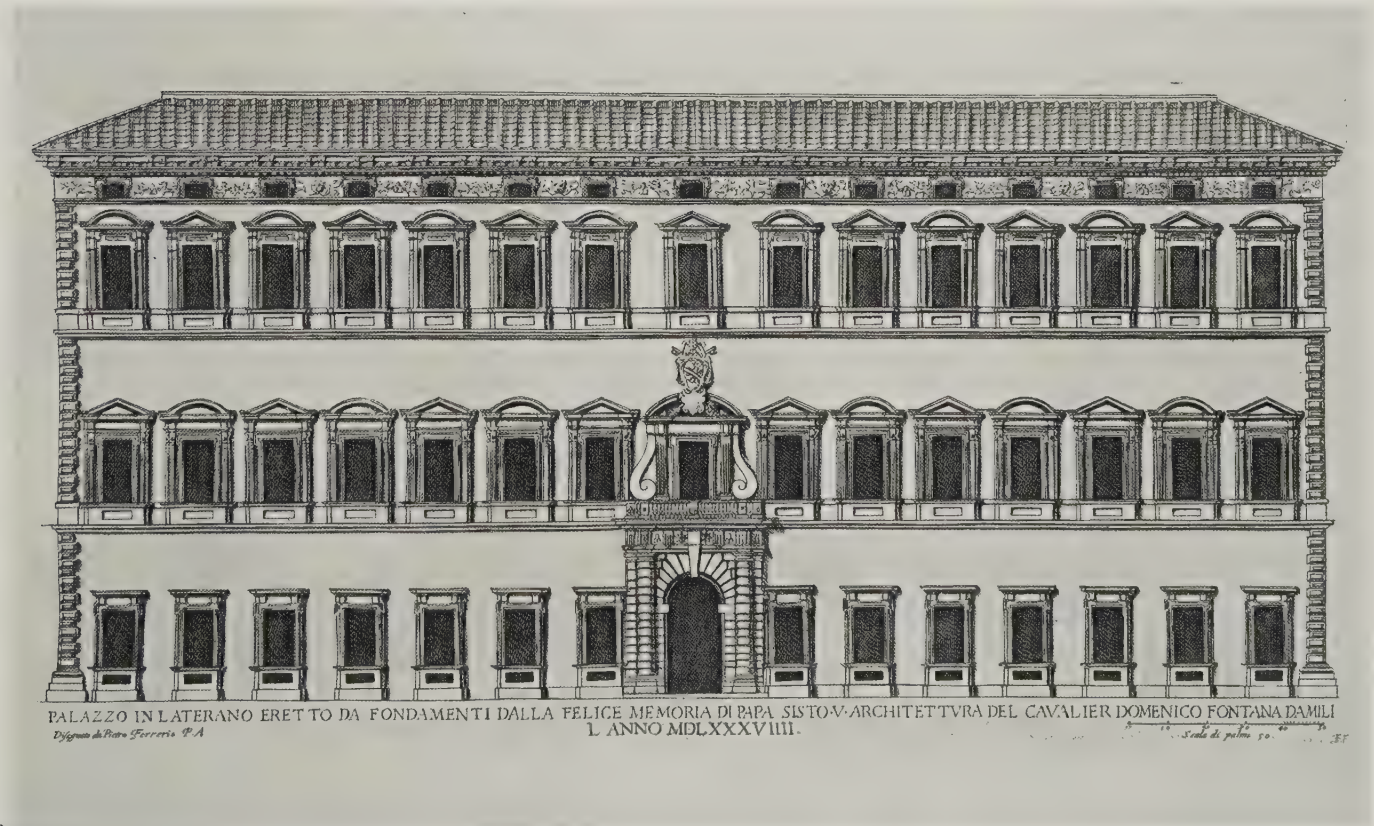


in innovations. If it was easy to set out a quadrangular plan on an open space, as at the Palazzo Farnese, it was more difficult to lay out suitable ceremonial rooms over a plot in the shape of a harpsichord, as at the Palazzo Borghese: the succession of architects involved (Tommaso del Giglio, then Martino Longhi for the Cardinal Pedro Deza who purchased the palace, and Flaminio Ponzio for the Cardinal Camillo Borghese, the future Paul V) had to demonstrate singular virtuosity in fitting out the interior. The Renaissance had also provided great models for villas. The most prestigious of all was the Villa Medici on the Pincio, transformed in the 1580s by Bartolomeo Ammannati for Cardinal Ferdinando de' Medici **[13]**. Unlike the austere façade that overlooks the city, the side facing the garden side, with its broad loggia open to the *piazzale*, is adorned with a wealth of carving, with statues placed in the niches and antique reliefs arranged into original compositions. Such decorative characteristics (excluding the antiquities) resurface in the villa built by Scipione Borghese at the beginning of the Seicento on other side of the Muro Torto **[14]**. Flaminio Ponzio, the architect of the cardinal *nipote*, and his Dutch successor Jan van Santen (Vasanzio) reverted to the principle of the U-shaped plan and its decorative options: a loggia framed by two avant-corps opening into a frontage laden with reliefs and decorative sculpture. In the course of the century, other designs, such as the Villa Pamphili (completed in 1647), demonstrate the same freedom of composition in tandem with rich ornamentation. This was also the case with the great villas on the Mons Albanus, in particular around Frascati: the Villa Aldobrandini, built around 1600 under the direction of Giacomo della Porta and Carlo Maderno, and the Villa Mondragone di Fassolo, completed by Vasanzio for Scipion Borghese in around 1613.

Town planning in Rome in the 16th century: papal projects and private strategies. At the beginning of the 16th century, Julius II's *renovatio Urbis* had laid the foundations of a new organization of the still very medieval city. As soon as he was elevated to the papal throne in 1585, Sixtus V relaunched the process and implemented an imposing restoration plan for Roman town planning, which he entrusted to Domenico Fontana. Within the general context of the Counter-Reformation, the task was to facilitate the movement of pilgrims between the main religious centers of the Urbs—that is to say the seven great basilicas, essential staging posts in the pious odyssey that were linked by a system of essentially straight roads. The first was the Strada Felice (today, Via Sistina) which, marked out by obelisks, led from the church of Trinità dei Monti to Santa Maria Maggiore. The Trinità dei Monti could be reached from the Porta del Popolo by Via del Babuino. Passing the Santa Maria Maggiore, the pilgrims could continue either toward Santa Croce in Gerusalemme, bear left toward San Lorenzo fuori le Mura, or turn right to make their way to the basilica of San Giovanni Laterano. The complex so created reemployed elements in the existing urban fabric (in particular the *trivium* of the Piazza del Popolo with Via del Babuino, Via del Corso, and Via di Ripetta), or else permeated the remaining empty space between the medieval city and the Mura Aureliane. Obelisks exhumed from the ruins and set up at strategic points marked out the route like grandiose signposts: the removal and re-erection of the one on St. Peter's Square provided Fontana with an opportunity to demonstrate his awesome technical talent, immortalized in a text he published specifically devoted to the feat.[3]

10.
Palazzo Farnese, Rome, façade.
11.
Palazzo Farnese, Rome, plan.
12.
Domenico Fontana,
Lateran Palace, Rome, façade.
Engraving after Pietro Ferrerio,
17th century. Private collection.

3. *Della trasportatione dell'obelisco Vaticano*, Rome, 1590.


PALAZZO IN LATERANO ERETTO DA FONDAMENTI DALLA FELICE MEMORIA DI PAPA SISTO·V·ARCHITETTVRA DEL CAVALIER DOMENICO FONTANA DAMILI
L ANNO MDLXXXVIIII.

12

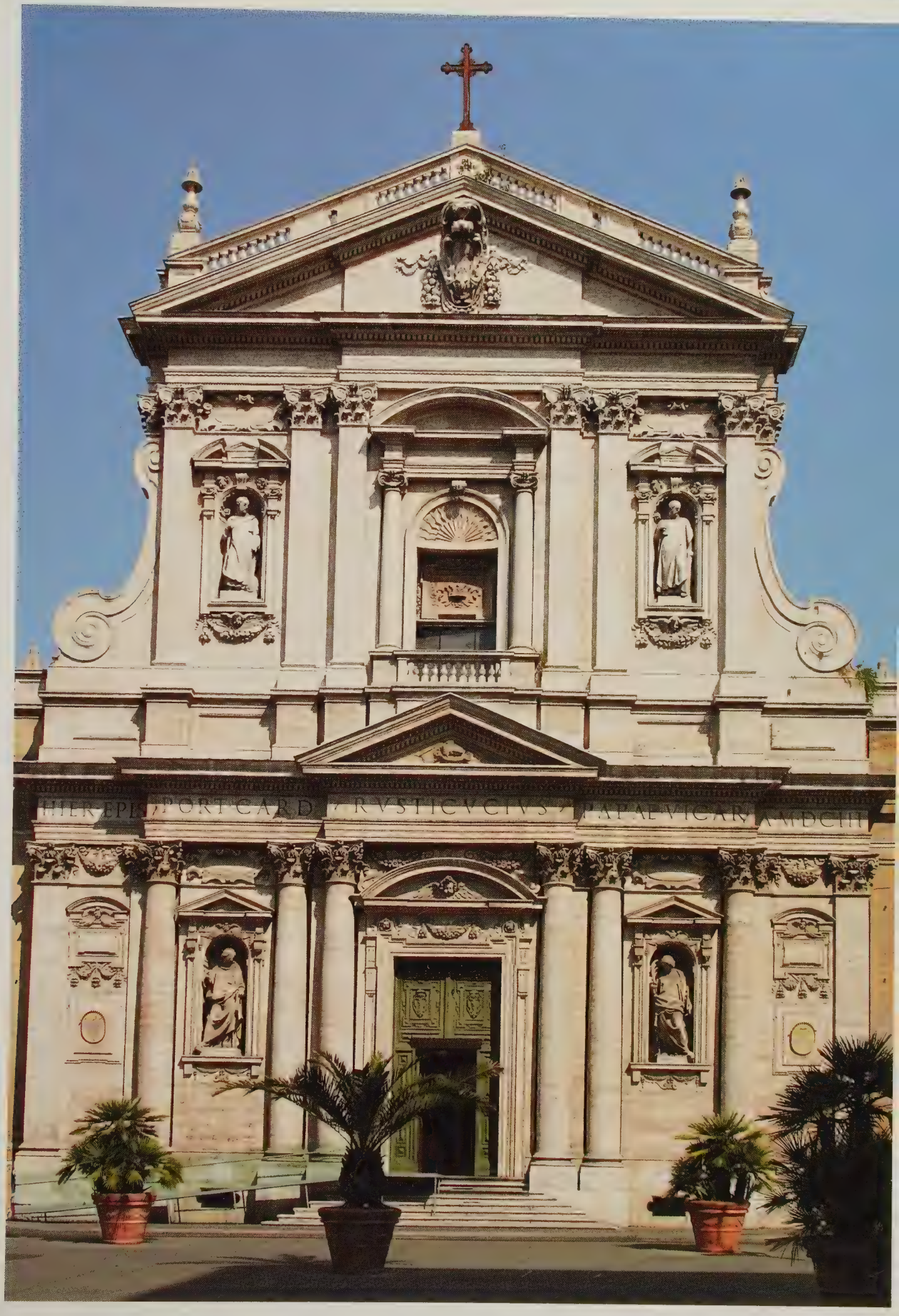
13.
Bartolomeo Ammannati,
Villa Medici, Rome.

14

14.
Flaminio Ponzio,
Villa Borghese, Rome, façade.
15.
Carlo Maderno,
Santa Susanna, Rome, façade.

In parallel with such major enterprises carried out throughout the century, Roman city planning was marked by initiatives undertaken by private individuals or by religious congregations. The Palazzo Farnese exemplified such sophisticated urban organization, as its qualities are strongly emphasized by both its position in relation to the piazza before it and the street in line with its entrance (Via dei Baullari) and the way it projected in relation to the axis of the thoroughfare perpendicular to it (Via Monserrato). Thus, every great family residence in the 17th century was designed with a square to underline its majesty, as is the case at the *palazzi* Almagià, Borghese, Chigi, and Colonna. It was not always easy, or even possible, to build these squares because the purchase of a plot and the demolition it entailed involved many private interests that often proved irreconcilable. The patrons of new churches such as religious orders encountered similar stumbling blocks; nevertheless, they were responsible for regularizing the piazza before the Oratory and Santa Maria in Valicella, the Piazza Campitelli, and, in the 18th century, the minute yet delightful Piazza Sant'Ignazio.

A man of transition: Carlo Maderno (1556-1629). Both in terms of his chronological position and his role in the history of architecture, one man perfectly embodied the transition between the two centuries: Carlo Maderno. Originally from the extreme north of Italy, he came to Rome to work with his uncle Domenico Fontana, Sixtus V's architect. He was related to Borromini and took him under his wing when, after becoming the chief architect in the Eternal City, he came south to exercise his talents. Maderno's career was marked by three major constructions. The first was the façade of Santa Susanna , completed in 1603, the same year the architect was appointed to oversee building at St. Peter's. The façade of Santa Susanna is truly the bridge between della Porta's Gesù (and even Vignola's plan) and its many Baroque variants. On the lower level, Maderno, combining pilasters and more or less projecting columns, accentuated the relief that remained only in



16.
Carlo Maderno,
St. Peter's, the Vatican, façade.
17.
Palazzo Barberini, Rome, façade.
18.
Palazzo Barberini, Rome, plan of the ground floor and the first floor.

16

germ in the Gesù, something in which succeeding architects were to revel. At the same time, he introduced rhythmical unevenness between the sides of the façade, animated by isolated supports, and the central zone, where both the ground-floor columns and the pilasters on the second level are coupled. Regarded very early on as a significant advance on the theme, Santa Susanna was much emulated. But Maderno's successors, by extrapolating his approach still further, ended up obscuring the originality of their model. The consequences of Maderno's interventions at St. Peter's were crucial. At the beginning of the century, the polemic on the future of Michelangelo's Greek cross plan was still a burning one. The formal perfections of the plan envisaged by the architect were countered by several objections of a practical nature: the lack of a sacristy, of bell towers, and finally of an aedicule from which the pope might pronounce his blessing. Moreover, the new, shorter plan of St. Peter's, which did not cover the entire surface of the *atrium* of the old basilica, would desacralize a large space in front of the edifice. The partisans of the modified plan having carried the day, Maderno extended the nave with two bays flanked by side chapels narrower than Michelangelo's aisles, erecting before it a vast barrel-vaulted vestibule. The hall's façade preserved the principles of Michelangelo's elevation, with a Colossal order bearing an attic. But the pilasters were replaced by columns, the four central ones being crowned with a pediment, probably a vestige of the tetrastyle portico the Florentine architect had planned **[16]**. To offer support for the two towers, Maderno widened the façade to both sides of the vestibule with two solid masses set slightly back and lined with pilasters. For various reasons, however, including the instability of the basement, these bell towers could not be erected, in spite of several attempts, so that the relationship between the height and width of the current frontage seems defective. One consequence of Maderno's intervention is that the newly lengthened nave prevents one from seeing Michelangelo's dome, since it cannot be viewed from the correct distance. It required all the genius of Bernini a few years later to endow the new St. Peter's Square with the perspective it needed and to furnish Maderno's façade and the entire basilica with a forecourt worthy of it.

Maderno was also responsible for the most original residence built at this time, the Palazzo Barberini. Maffeo Barberini's accession to the pontificate prompted his family to build a dwelling more in keeping with his new rank than the "Casa Grande" on Via dei Giubbonari. In December 1625, his nephew Francesco purchased from Alessandro Sforza a property on the northern slopes of the Quirinal. The plan Maderno adopted was novel. The new residence of the Barberini, which incorporated the *palazzetto* Sforza, is a compact construction with two strongly projecting fore-parts on the side of the loggia that gave onto Strada Felice (today, Via delle Quattro Fontane), but with less relief for the side facing the garden **[17]**. On the ground floor, the apartments are distributed to both sides of a long, deep portico with seven arches on the façade, extending into a spectacular semicircular apse. Two staircases, one square and the other oval, allow access to the apartments of the *piano nobile* and the ceremonial rooms: a *salone* behind the loggia over two levels, a vast initial anteroom reserved for theatrical activities and an oval hall giving onto the garden. The southern suite belonged to the cardinal nephew, Francesco, while his brother Taddeo with his family occupied the

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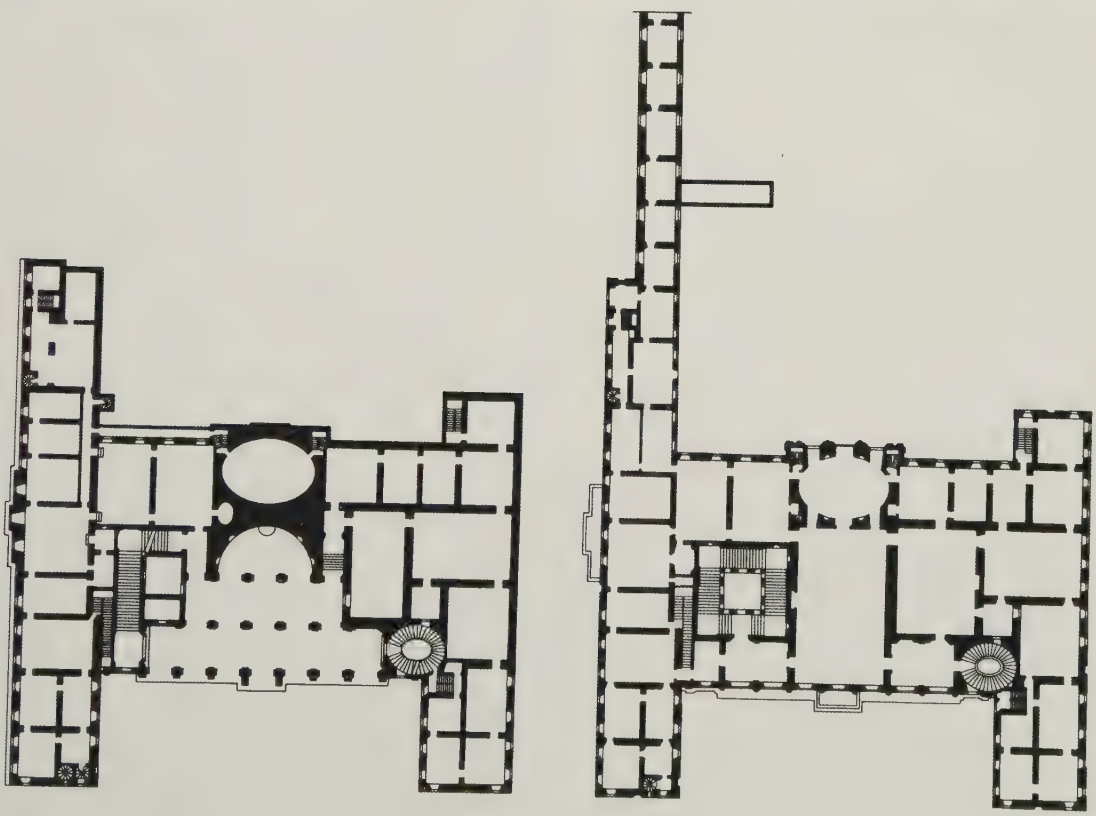

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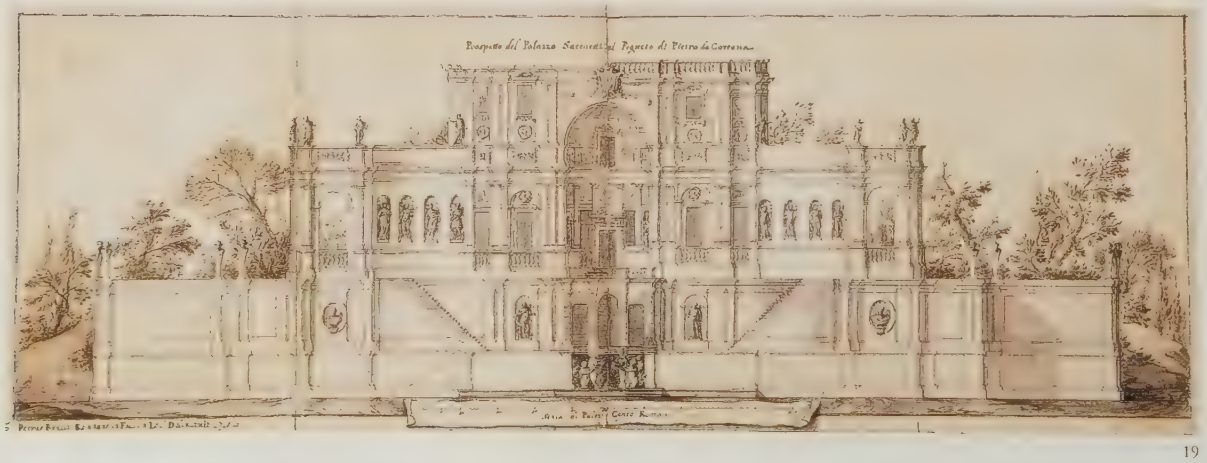
19.
Pietro da Cortona,
Villa Sachetti del Pigneto.
Drawing by Pietro Bracci, 1719.
Canadian Centre for Architecture, Montreal.
20.
Franceso Borromini,
Palazzo Barberini, Rome,
detail of a window.

apartments to the north on the ground floor and those above **[18]**. The H-shaped plan probably reduced the cost of incorporating the pre-existing *palazzetto*; at the same time, the building's structure facilitated the dual distribution of the apartments occupied by the brothers. Urban VIII and his nephew Francesco, who had both sojourned in France, perhaps wished to endow the family residence with a grand courtyard, as at the Château de Luxembourg built by Solomon de Brosse from 1615 for the queen mother (which also possessed two apartments, one for Maria de' Medici and the other for her son, Louis XIII). When Maderno died in January 1629, the direction of the site fell to the young Bernini, who was already part of Maffeo's entourage. Borromini also worked there, displaying inventiveness in the design of the windows in the bays located between the wings and the loggia, as well as his architectural knowledge (the ground floor echoes the bays on the first level on the exterior of St. Peter's and those of the first floors of the façade of the Palazzo Farnese) and originality (with the designs for the windows on the last level and those for the doors in the great room) **[20]**. This unique palace, whose grand *salone* had been decorated by Pietro da Cortona and enriched by Andrea Sacchi and some of the best-known painters of their generation, and which had been complemented by a vast garden, was also the focus of intense musical activity. The Barberinis had in their service some of the finest musicians of the age: Luigi Rossi, the organist at St. Peter's, Girolamo Frescobaldi, and the lute virtuoso, Girolamo Kapsberger. It was in the provisional theater installed in the palace that in 1632 Stefano Landi's *Sant'Alessio* was performed, an oratorio-opera written to a text by Giulio Rospigliosi (the future Clement IX), whose sumptuous production values and use of *machines* offered a foretaste of the developments of Venetian Baroque grand opera.

The masters of the Roman Baroque: Pietro da Cortona, Bernini, and Borromini

From the 1630s on, the effervescent state of Roman architecture recreated in some respects the architecture that emerged from the collaborations of Julius II and Leo X with Bramante, Raphael, and Michelangelo in the early 16th century. Popes Urban VIII, Innocent X, and Alexander VII, all three receptive to art and architecture, allowed a generation of exceptionally gifted artists to express their genius: the Tuscan Pietro Berrettini, known as Pietro da Cortona, the Neapolitan Gian Lorenzo Bernini, and Francesco Borromini, a native of Bissone, near Como on lake Lugano.



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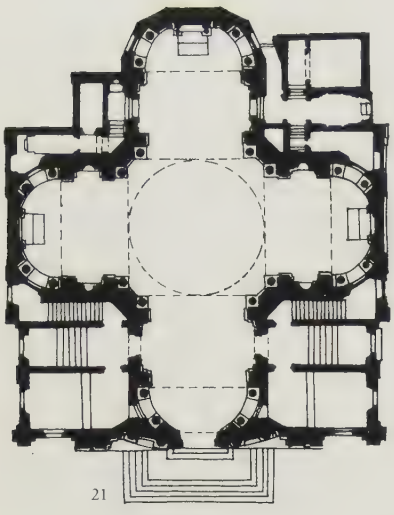
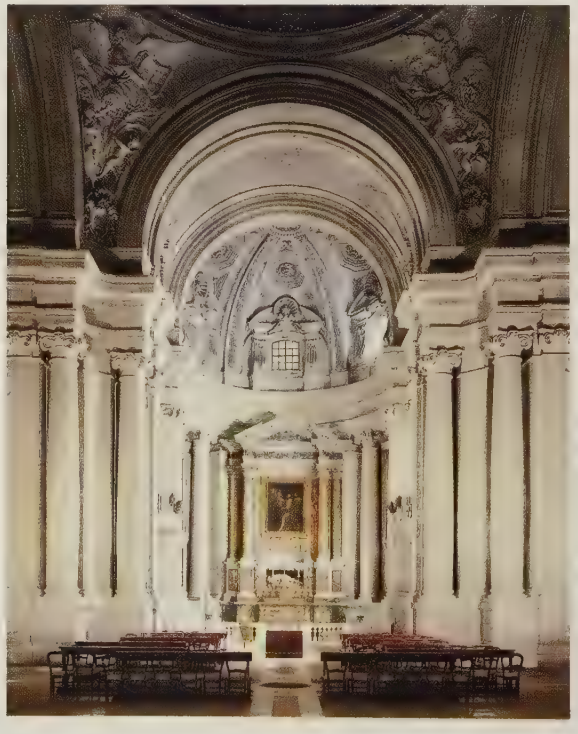


21

21.
Pietro da Cortona,
SS. Luca e Martina, Rome, plan.
22.
Pietro da Cortona,
SS. Luca e Martina, Rome, façade.
23.
Pietro da Cortona,
SS. Luca e Martina, Rome, interior.

Pietro da Cortona (1596–1669). From the milieu around the Barberinis, and more particularly from Cassiano dal Pozzo, Pietro da Cortona absorbed a truly Humanist culture, enabling him to acquire an enviable reputation for his knowledge of antiquities. This culture found an outlet for instance in the Palazzetto del Pigneto (no longer extant today) on the edge of Rome, built before 1630 for the Sacchetti family. Its design with an exedra strongly recalled, albeit on a smaller scale, the reconstruction of the temple of *Fortuna primigenia* at Praeneste (Palestrina), which the artist had drawn, and the upper court of the Belvedere, with Bramante's exedra enlarged at the end of the 16th century by another famous antiquary, Pirro Ligorio **[19]**.

The work of Pietro da Cortona, who was also a great painter, is at its most individual in religious architecture. The church of SS. Luca e Martina on the Roman forum was built between 1635 and 1650. At the outset, the brief had only been to restore a church Sixtus V had designated for the Accademia di San Luca. But the project became much more extensive when the relics of St. Martina and other martyrs were uncovered during construction. The building as finally built was designed as a Greek cross slightly elongated whose arms terminate in apses **[21]**. It has a vast façade incorporating two superposed orders, breaking with the Gesù type insofar as the two levels are of similar width **[22]**. Above all, the front is not linear, but characterized by a convex central section apparently compressed between two lateral zones formed of two rows of coupled pilasters that play the role of gigantic pillars. This surprising composition combines a curvilinear sweep with an upright, solid, and reassuring structure. The second characteristic of the frontage of SS. Luca e Martina is the complex play of the relief. The closely juxtaposed supports, pilasters, and niched columns create a vigorous contrast combined with effects of compression reinforced by the opposition between the two levels (the pilasters on the second level are borne by columns on the ground floor, and vice versa). Such relief clusters, inaugurated in Florence by Michelangelo at the Laurentian Library and the façade of San Lorenzo, are typical of the time. They combine with the curves of the central zone to accentuate the effect of plasticity. In the decoration of the drum and summit lantern, the original forms—capitals with glyphs and guttae, semicircular pediments surmounted by curious volutes borrowed from the Ionic capital—also refer back to the inventions of Michelangelo at the Palazzo Farnese and the Porta Pia. Similarly spectacular effects occur within **[23]**. In spite of the Greek-cross plan close to Renaissance models (Bramante and Michelangelo's St. Peter's), the outcome is very different, as the equilibrium inherent in this



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type of plan is upset by the constant variations of relief animating the walls: the columns, be they detached or ensconced in niches, acquire unexpected plastic power, reinforced by the handling of the cupola and the half-domes in the apses whose radiant tracery clashes with the octagonal coffers.

The façade of Santa Maria della Pace, executed after 1659 at the behest of Alexander VII (the Chigi family possessed a chapel in the church), allowed the artist to reveal his true genius for theater: not content to design an isolated building, Cortona set it in an urban context by creating a *piazzetta*, that made it possible for the convex porch at ground level to emerge from the sides of the façade, which in fact cover the annexes on the left and a passageway linking the Vicolo della Pace with the Vicolo della Volpe on the right. In spite of the restricted site, this arrangement confers singular majesty on what is a relatively small church **[24]**. The elevation of the

24

building is just as sophisticated. The first level of the central zone is characterized by a projecting porch, in the form of a circular arch, with an entablature borne on twinned pillars. The second level harks back to SS. Luca e Martina with the swelling at the center that appears hemmed in by the two pillars framing it. This convex surface is enlivened by a complex play of relief and the rhythmical nature of the supports; it bears two pediments—segmental and triangular— embedded one in the other in a virtuoso design.

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The elevation of Santa Maria in Via Lata on the Corso, built after 1658, is rather different. There are no curves, but rather, on the ground floor, a portico with a Corinthian colonnade bearing a straight entablature that evokes a secular precedent at the Palazzo Massimo alle Colonne by Baldassare Peruzzi, with the paradoxical difference being that the palace possessed a curvilinear plan **[25]**. The reference becomes more precise in the interior treatment of the portico, which terminates in exedras with coffered half-domes, just as in the palace built by the Sienese architect; furthermore, the selection of Corinthian columns evokes the hall of the sacristy at Santo Spirito in Florence, with which the Tuscan Cortona must surely have been very familiar. On the floor above, the supports bear an entablature in the center of the edifice that forms an arch that penetrates into the pediment. This very original solution had hardly any precedents in ancient architecture, apart from the arch at Orange by Giuliano da Sangallo. It was even extremely rare in the architecture of the period (one façade designed by Leon Battista Alberti for the church of San Sebastiano in Mantua). This architectural solution, which as a whole points more to civil than ecclesiastical architecture, perhaps alludes to paleo-Christian sanctuaries that were originally private houses. Moreover, the church rises at the site of a dwelling where St. Paul is meant to have stayed.

With its contrasts between motion and stability, search for sculptural effects, and references to the innovations of Michelangelo, Pietro da Cortona's work epitomizes the finest Roman architecture of the 17th century. It was the task of another great artist, Gian Lorenzo Bernini, who was also a painter but more especially a supreme sculptor, to put into practice another of the lessons of Bramante and Michelangelo: monumentality.

24.
Pietro da Cortona,
Santa Maria della Pace,
Rome, façade.
25.
Pietro da Cortona,
Santa Maria in Via Lata,
Rome, façade.

Bernini (1598–1680). Bernini was one of the greatest artists of the 17th century. Simultaneously painter, sculptor, and architect like Michelangelo, he was a favorite of the Borghese, Barberini, and Chigi popes. It was in 1624—when he was not yet thirty—that he received his first architectural commission: the façade of Santa Bibiana (a church decorated with frescos by Pietro da Cortona) and the immense bronze baldachin of St. Peter's. If the first of these works remains rather unassuming and traditional in its design—in spite of a relatively original loggia **[26]** on the second level—the latter is of altogether different dimensions, both due to its prestigious location and its scale. Bernini took as his starting point the antique "Solomonic" columns of the Constantinian basilica, twisted and decorated with vine stocks teeming with birds and putti **[27]**. Hugely famous in the Renaissance, they had often been reproduced by painters and architects. So the torque of these columns, often given as an example of the Baroque taste for movement, was nothing new—indeed, such a reference was even to be expected in a basilica. The innovation lies in their association with a crown-piece that is also very vigorous, formed of sumptuous volutes—Borromini surely had a hand in these designs—and most especially in its monumental height of nearly twenty meters. Placed at the center of the crossing, the baldachin provides a suitable conclusion to the immensity of Bramante and Michelangelo's masterpiece, while adding fresh tension to its spatial dynamic.

26.
Bernini, Santa Bibiana, Rome, façade.
27.
Bernini, baldachin of St. Peter's, the Vatican.

This rootedness in Renaissance art comes to the fore again in plans of several churches built by Bernini: San Tommaso da Villanova at Castelgandolfo (1658–61) built for Alexander VII, where the extreme simplicity of the Greek cross with truncated arms evokes Raphael's plan for Sant'Eligio degli Orefici near Via Giulia; Santa Maria dell'Assunta, built for the pope at Ariccia (1662–64) in front of the Palazzo Chigi, a sanctuary comprising a rotunda on which rests a dome—as at the Pantheon in Rome or the chapel Palladio erected at Maser for the Barbaro brothers. Even the oval plans, like that of Sant'Andrea al Quirinale in Rome (1658–70), may allude to models by Serlio or to the precedent of Vignola at Sant'Anna dei Palafrenieri **[28]**. But in the treatment of the elevations and the interior spaces, Bernini gives free rein to his own genius.

At Castelgandolfo, the relatively imposing height of the church confers on it a majesty quite distinct from that of Renaissance models, even if the external elevation, pieced out by low-relief pilasters, might evoke that of Santa Maria dei Carceri in Prato (1485–90) by Giuliano da Sangallo; at Ariccia, the external composition, with two series of galleries framing the façade laterally and curving round to embrace the edifice up to the choir, transforms what is a sanctuary of rather modest size into the new monumental Pantheon Alexander VII must have had in mind **[29]**. And finally at Sant'Andrea al Quirinale, where the use of the Colossal order on the frontage, the transversely centered oval plan, and the richness of the interior, with its reliefs and rhythmically placed polychrome marble, are dizzying, leaving the impression of a building far larger that it actually is **[30]**. The interior spaces at Sant'Andrea are truly

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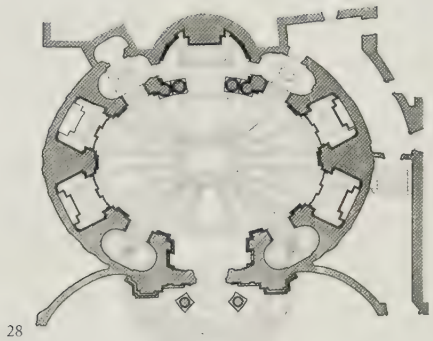

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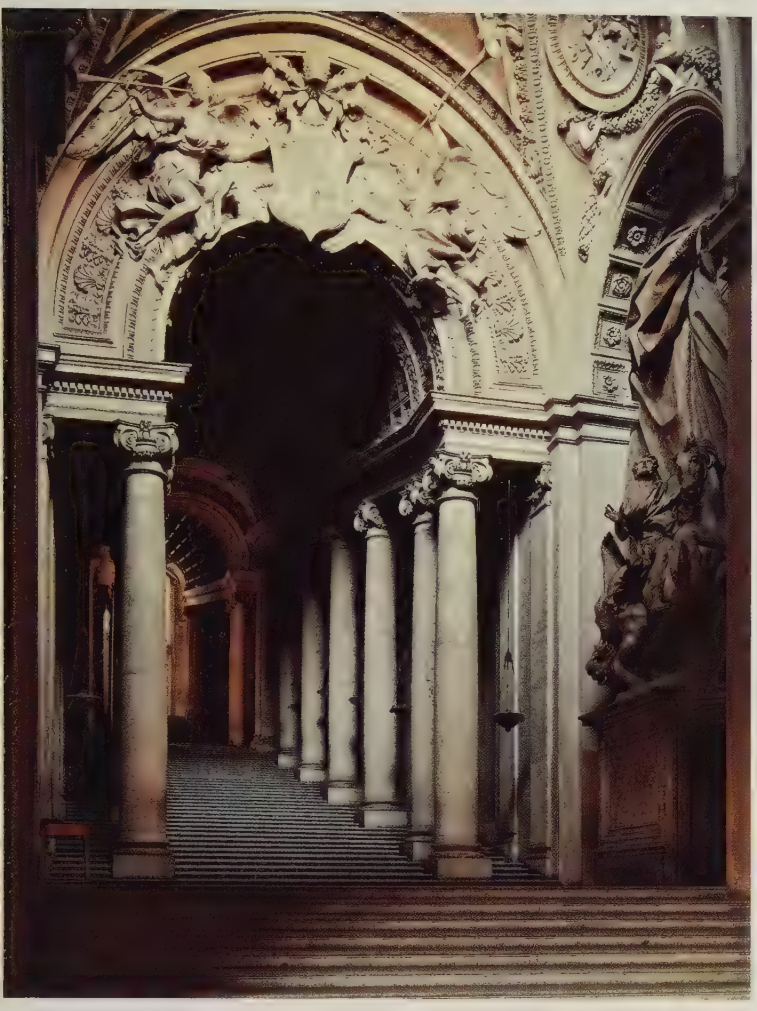
28.
Bernini, Sant'Andrea al Quirinale, Rome, plan.
29.
Bernini, basilica of Santa Maria dell'Assunta, Ariccia.
30.
Bernini, Sant'Andrea al Quirinale, Rome, façade.

theatrical, with every element playing a part. Quixotically, Bernini had the light descend from on high and illuminate the sculpture—as with the statue of Constantine at the foot of the Scala Regia, the monumental staircase leading to the reception rooms of the Vatican Palace **[31]**. In the lesser axis of the oval at Sant'Andrea, the visitor finds himself before an altar sumptuously highlighted by the twin flanking pillars and the broken pediment above: the rhythm and relief of the order contrast with the treatment of the remainder of the wall **[32]**. To add life to this architectural stage-set, a picture of the saint's martyrdom is placed above the altar, while on the entablature a statue encroaching on the slope of the pediment shows him being lifted up to paradise. Cherubs balancing on window frames at the base of the cupola escort the saint merrily up in the direction of others, who surround the light coming from the lantern. All the arts conspire to delight the beholder: in the same way as at Castelgandolfo or Ariccia, the plasticity and the tension of the architecture (the domes, like that of Sant'Andrea, consist of octagonal coffers separated by broad ribs in an apparent opposition between two types of structure) are complemented by sculptures with plinths adorned by angels and garlands. The finishing touches to the interior "performance" are provided by the painting on the high altars which were for the most part designed by Bernini himself.

Although there are no buildings entirely carried out to his designs, the contribution of Bernini to civil architecture was far from negligible. At the Palazzo Barberini, he did little but continue the construction work started under Maderno. At the Palazzo Chigi-Odescalchi, started in 1664 and modified considerably during the 18th century,



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31.
Bernini, Scala Regia, St. Peter's, Vatican.
32.
Bernini, Sant'Andrea al Quirinale, Rome, interior view.

by employing the Colossal order and by dividing the façade into three distinct parts he renewed the Roman classical type of the Palazzo Farnese **[34]**. This characteristic tripartite design first appeared in the plan for the Palazzo Ludovisi at Montecitorio, where building stopped in 1654 (the works were completed by Carlo Fontana in 1694), for which Bernini had designed a façade that is not rectilinear, but made up of a central section framed by two side zones canted and slightly set back. At the ends of these three parts towers a Colossal order, and the architect had planned for the plinth some rough rustication visible today on the sills.

Bernini had a hand in all the great projects: although his designs for the Fontana di Trevi or the Spanish Steps were never carried out, nor those he presented to Louis XIV for the new Louvre, he nonetheless left a permanent mark on the Roman cityscape, embellishing it with many fountains, some of which, such as that of the Four Rivers (the Fontana delle Quattro Fiume) on Piazza Navona, are developed on an almost architectural scope.

However, it was in laying out St. Peter's Square in the years after 1656 that Bernini was able to give expression to his sense of the monumental. He was faced by countless difficulties, material as well as esthetic. The architect conceived of two spaces open one to the other: one, a trapezium, whose two converging sides meet the façade of the basilica, and a second oval in form. These two shapes obviously recall Michelangelo's design for the Piazza del Campidoglio, where the oval of the pavement is inscribed within the trapezoidal space formed by the Palazzo del Senatore and the convergent arms of the palaces to the sides (Palazzo Nuovo and Palazzo dei Conservatori). At the

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33.
Bernini,
colonnade in St. Peter's Square, Vatican.
34.
Bernini,
Palazzo Chigi-Odescalchi. Engraving by Giovanni Battista Falda, 17th century. Private collection, Rome.

outset, Bernini had envisaged taking the same model as a starting point for the elevation to the sides, but he rejected the idea, needing to find a solution at once grand but not too high, so as to not to mask the façade and dome of St. Peter's: the galleries formed of sturdy columns laid out along four parallel lines fulfill these two conditions perfectly **[33]**. The power evinced by the proportions of columns of a "Tuscano-Doric" order is reinforced by a density and depth in their placement that attains a grandeur which strikes the viewer's senses forcefully. This was one legacy of Michelangelo, here explicitly embraced and asserted; the elder architect's legacy of inventiveness, originality, and creative verve would taken up by another great talent, Francesco Borromini.

Borromini (1599–1667). When he arrived in Rome in about 1619, the young Borromini already possessed a solid foundation as a decorative sculptor that he had acquired at the workshop of the Duomo in Milan, as well as good training in mathematics and geometry. He was able to perfect this education at the great site of St. Peter's under the direction of Maderno, a distant relative, and at the Palazzo

Barberini, where he assisted Bernini. He must also surely have contributed to the designs for the superstructures of the basilica's great baldachin. Unlike the internationally renowned Bernini, weighed down with honors and summoned to design a new Louvre for Louis XIV, Borromini was a tormented figure whose profound insecurities drove him to suicide. After his break with Bernini, this exceptional practitioner, an intellectual who always combined theory and practice, developed a new language during a career almost exclusively devoted to the service of religious brotherhoods and private patrons. The only pope to entrust him with major projects was Innocent X Pamphili.

"*Non mi sarei mai posto a quella professione, col fine d'esser solo copista*" (I would never have taken up this profession if I'd just wanted to copy), he writes in the introduction to the posthumously published *Opus architectonicum*. And in point of fact, few architects have ever been as inventive and innovative as Borromini. But this imagination was founded on a universal culture. Although he naturally enough took inspiration from the most recent architecture, that of the Roman Renaissance and of Michelangelo particularly, neither Sangallo, nor Vignola, nor Palladio were alien to him. Highly inquisitive, he was drawn to unfamiliar models, for instance those of late antiquity, as with the example of the Villa Adriana, which the collections of Montano published by Soria were popularizing in the 17th century. He might also recall forms neglected in his own day—those of Brunelleschi for example, or paleo-Christian antiquity, or even the Gothic of the cathedral of Milan, which he knew so well, a tendency for which he was reproached by several contemporaries disconcerted by the strangeness of certain works. There can be few architects in any case whose curiosity was so open and whose culture was so wide, as his exceptionally well-stocked library numbering more than one thousand volumes attests. Combined with technical knowledge, such intellectual command must surely make Borromini one of the supreme artists of the period.

PALAZZO DELL' EMIN.MO ET REV.MO SIG. CARDINALE FLAVIO CHIGI NEL RIONE DI TREVI LA PIANTA E L'DIDENTRO È ARCHITETTVRA DI CARLO MADERNI LA FACCIATA DI FVORI DEL SIG.CAV. GIO.LORENZO BERNINI.
Gio.Batta Falda del et incis.
Gio.Iacomo Rossi le stampa in Roma alla Pace co Priu. del S.P.

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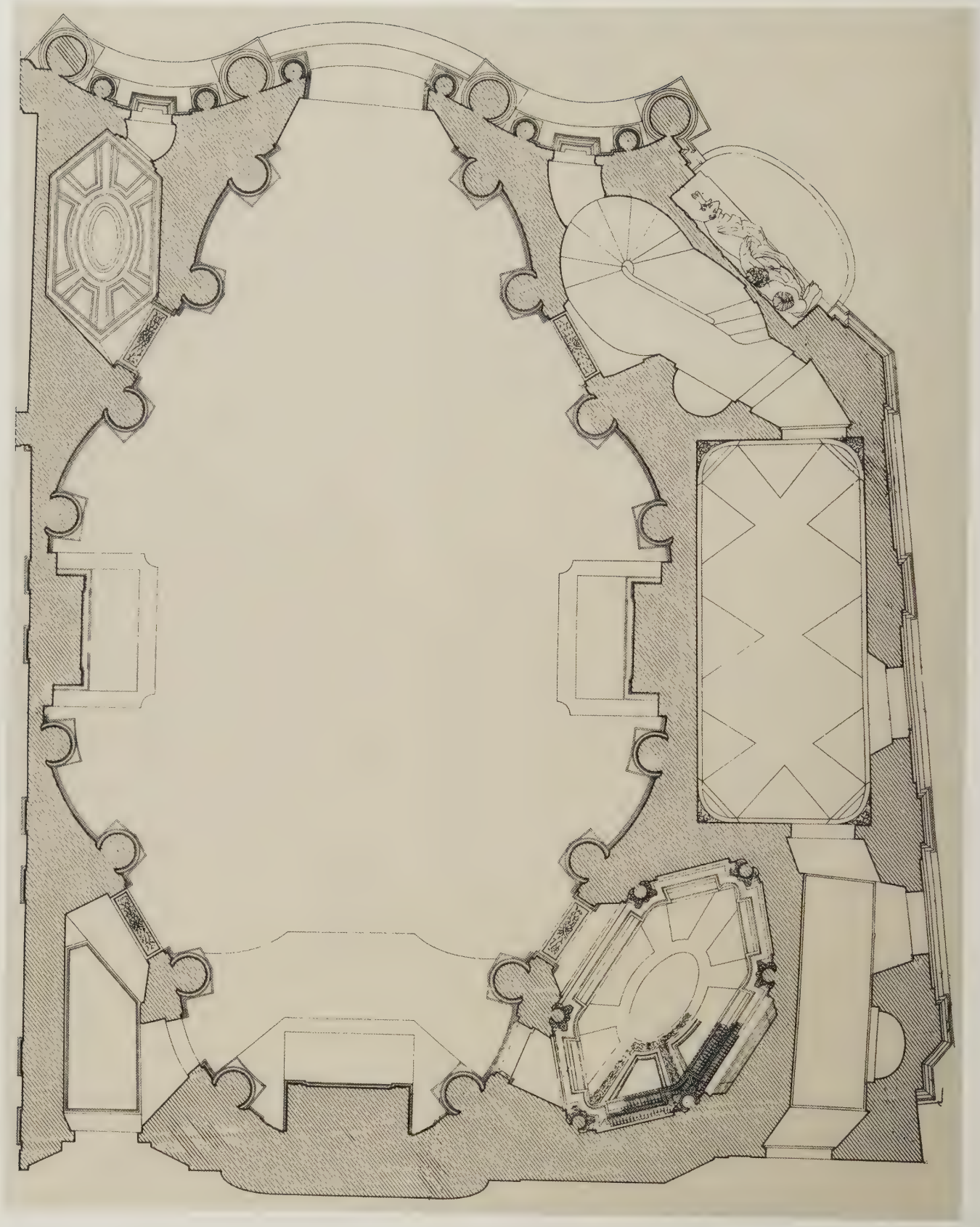

Francesco Borromini,
San Carlo alle Quattro Fontane, Rome,
35. plan (Paolo Portoghesi, *Franceso Borromini*, Milan, Electa, 1991, p. 45).
36. cupola.

S·CAROLO·BORROMEO·D·AN·SAL·M·DC·XL + SANCTISS·TRINITATI·BEATIQ

38

37

39

The convent and church of San Carlo alle Quattro Fontane was one of his earliest and most revealing commissions. The building, dedicated to St. Carlo Borromeo, was executed between 1638 and 1641 for a community of Trinitarians. In what was a tiny space, Borromini skillfully laid out a small church flanked by a minute cloister. The plan of the church is inscribed within an oval generated by two conjoined equilateral triangles in an obvious allusion to the Trinity. This is supplemented by four apses so as to form an elongated cross, mildly distorted in the central space as well as in the four arms **[35]**. The entablature limiting this space thus consists in curved zones (in the apses) and straight ones (beneath the pendentives). This weird shape entails an oval cupola, whose coffered decoration undergoes the same deformations, taking on a fantastic form. The connection between the uneven lines of the entablature and the oval

of the cupola also requires pendentives of unusual form that Borromini, with his unfailing genius for decoration, adorns with one of his favorite motifs: winged angel heads **[36]**. The choice of orders is also very characteristic: Borromini used columns that reinforce the plastic effects of an already highly dynamic wall, providing it with a strange, almost cylindrical plinth, like that imagined by Michelangelo for the *Ricetto* at the Laurentian Library in Florence, and with capitals that differ depending on whether they are placed under the pendentives or in the apses **[37]**. Some are characterized by reversed urillae—soon to become a commonplace of Borromini's manner—whereas in others, apparently more orthodox, the ovas in the echinus morph into opening or splitting pomegranates. The "metamorphosis" of abstract decorative elements into more or less realistic forms was one of Borromini's favorite techniques: the pediment of the façade of San Carlo was replaced by angels' wings, and, at Sant'Ivo, the ovolo of the cornice was transformed into little faces of angels flanked by small wings **[38]**, while the bursting pomegranates reappear on the capitals of the Colossal order of St. John Lateran **[39]**. The church was completed by a cloister begun in 1635, also of a new form: a rectangle with corners occupied by quadrants that jut out. The continuous serliana on the ground floor, judiciously counterpoised by the isolated motif at the extremities, gives unexpected breadth to what is a severely curtailed space **[40]**.

37.
Francesco Borromini,
San Carlo alle Quattro Fontane,
Rome, interior, detail of the Order.
38.
Francesco Borromini,
Sant'Ivo alla Sapienza, Rome,
detail of the cornice of the drum.
39.
Francesco Borromini,
St. John Lateran, Rome,
detail of a capital.
40.
Francesco Borromini,
San Carlo alle Quattro Fontane,
Rome, cloister.

41.
Francesco Borromini,
Sant'Andrea delle Fratte,
Rome, dome.
42.
Francesco Borromini,
Sant'Agnese in Agone, Rome, façade.
43.
Francesco Borromini,
Sant'Ivo alla Sapienza, Rome, plan.
Drawing, Vienna, Albertina.

41

The details of the ornamentation are equally original: the "capitals" of the columns at ground level persist around the entire perimeter of the work, simultaneously forming the entablature; on the level above, they are octagonal in plan. For this level, Borromini designed balustrades whose pear-shaped balusters are alternately inverted, creating superb effects of light and shade.

The façade of San Carlo, created in about 1665 toward the end of the architect's life evinces the same sense of surprise: the curves and counter-curves impart a fluid movement with an extraordinary sculptural effect [see page 6]. The elevation is of itself very complex. The ground floor is composed of a convex central section framed by concave side zones; above, the three sections are concave but in the center Borromini placed a small projecting aedicule, generating the contrary effect. In the wake of Michelangelo at the Capitol, on both levels Borromini interwove orders of differing sizes and endowed them with capitals and bases of an entirely unheralded profile. Throughout his career, the architect would seize the opportunity to essay plans of curve and counter-curve: at the dome of Sant'Andrea delle Fratte, where concave and convex surfaces are organized around a structure in the shape of a cross of St. Andrew **[41]** and at the façade of Sant'Agnese in Agone, where, echoing the works begun by Girolamo and Carlo Rainaldi, the plan is for a bowed façade. Having quarreled with Camillo Pamphili, however, Borromini was forced to abandon the building, and his plan was somewhat disfigured by Carlo Rainaldi and the other architects employed by its patron **[42]**.

The façades of the Oratory of San Filippo Neri and Sant'Ivo alla Sapienza provide further spectacular examples of Borromini's penchant for complex volumes and involved surfaces. The plan for Sant'Ivo, consisting in two interlocking equilateral triangles with rounded apexes either scooped out or bulging **[43]**, is exceptional in its very principles. Indeed, in the previous century only architects as inventive as Peruzzi and De l'Orme had tried out such an idea, in a plan for a church by the former[4] and in the château at Saint-Germain-en-Laye by the latter. The interior space thus generated

4. Florence, Gabinetto Disegni e Stampe degli Uffizi A 553 verso.

elicits an extraordinary effect: the continuity of the wall is constantly called into question by unexpected formal incidents—acute or obtuse angles, stretches of curvature—which also upset the morphology of the orders **[45]**. Similarly, the exterior of the sanctuary, emerging at the back of a huge courtyard built during the previous century by Pirro Ligorio, has a striking undulating surface, underscored by the irregular placement of the pilasters, isolated or gathered in dense clusters. No less astonishing is the lantern, with its helical spiral, quite unique in Rome **[44]**. Though rare, such effects were not however due to chance. They were the fruit of a long period of research into form, as the architect's drawings testify. Their apparent freedom was in fact the result of rigorously composed combinations of simple initial forms.

For the Oratory, Borromini was confronted by the age-old theme of the church façade: the building commissioned from him by the Oratorians in 1637 stands next to the church of the Congregation, Santa Maria in Valicella, whose façade had been raised in about 1605 by Fausto Rughesi. So as to differentiate it without forfeiting the overall coherence, Borromini chose to vary the materials, using the more modest brick to express the humility of the residence compared to the travertine of the church. Only the capitals, bases, and window frames are of stone **[46]**. And although the general appearance, the two superposed orders, and the upper pediment echo the frontage of the sanctuary, Borromini's handling of the façade is very different and infinitely more inventive, with a complex interplay of convex and concave forms and an extremely diverse ornamentation. The palace façade too proved fertile ground for Borromini to affirm his idiosyncratic genius. If the frontage of the Palazzo Falconieri toward the Via

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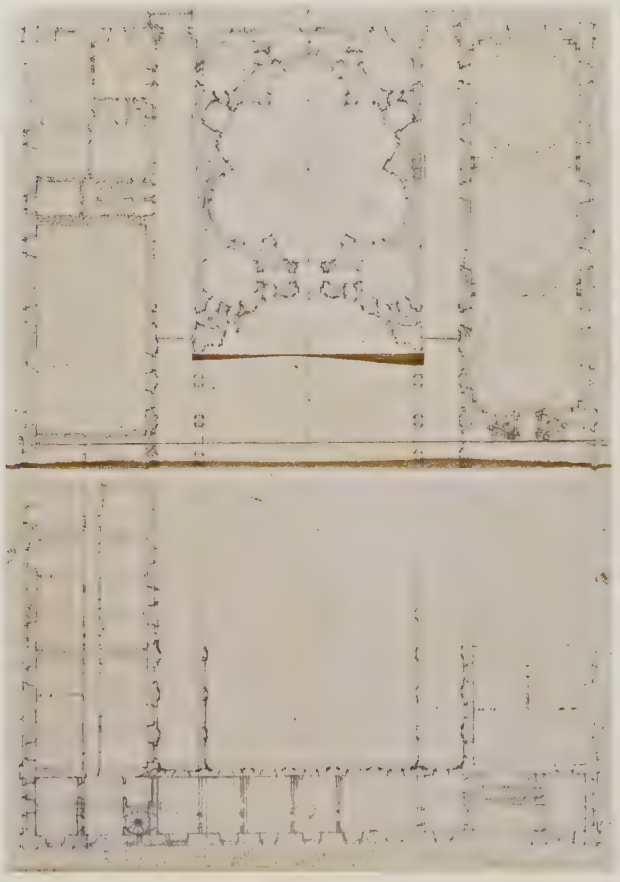

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Giulia is characterized solely by the bizarre falcon-shaped pilasters to the sides (the garden façade, with its loggias, is much more unconventional), his treatment of the façade for the Collegio di Propaganda Fide (from 1655 on), with its giant pilasters bearing an attic story above a powerful cornice studded with sturdy quadrangular consoles, and with an odd doorway with grooved pilasters in the concave central part, recalls the monumentality of the palaces on the Capitol; the reference to Michelangelo is repeated in the design for the central bay on the second level, where the supports condensed to the sides evoke the central bay of the Palazzo Farnese, this being a convex version [**47**].

Borromini shows identical audacity in the treatment of the interior. He had a fondness for volumes generated by rectangles with lopped corners, both in churches, like at Santa Maria dei Sette Dolori, construction of which he oversaw in 1642, and in more restricted spaces, like the Oratory (from 1637) or the Cappella dei Re Magi in the Collegio di Propaganda Fide (1660), with columns for the one and pilasters for the other. In both cases, the spaces are roofed by highly original vaults scored by broad, flattened ribs that intersect to form complex networks, not unlike Gothic structures [**48**]. The main hall in the Palazzo Carpegna near the Fontana di Trevi should also have been built to a rectangular plan with cropped angles. Never carried out (except for the atrium, today the seat of the Accademia di San Luca), this project embodied a superb plan that demonstrated Borromini's brilliant handling of space: on the trapezoid plot, he placed the hall on a longitudinal axis, leading on the right to a large dogleg staircase, then a vast oval courtyard with a colonnade, and finally a corridor on which would have opened a great stairway with semicircular flights.

45

Only once did the architect have the opportunity to tackle a truly vast project. In 1646 Innocent X appointed him to oversee the restoration of the basilica of St. John Lateran (San Giovanni in Laterano) in readiness for the Jubilee of 1650. Borromini replaced the original colonnades in the nave with a vigorous span of giant pilasters laid out in the "alternating" manner enshrined by Bramante at the Cortile of the Belvedere. But, as the levels of the elevation are more numerous and the relief accentuated, the design is infinitely more complex. In the lower reaches, arches open out at spacious intervals, while the windows pierced in the upper zones bathe the building in light [**49**]. Three layers of decoration appear in the narrow intervening zones: large convex niches sheltering statues, tables with carved reliefs, and finally oval painted medallions. With rhythmical variation conjoined to plastic variety, the nave of the Roman cathedral takes on a wholly different dimension. It would have been more extraordinary still if, as Borromini envisaged, he had been able to replace the wooden ceiling by a vault with broad intersecting ribs; but the pope was determined to preserve the original ancient ceiling. Nevertheless, the effects of variety continue in the aisles: the first is covered with vaults on pendentives, while the second, less high, spanned by flat vaults; both are populated by angels, some encircling the cupola, others acting as consoles.

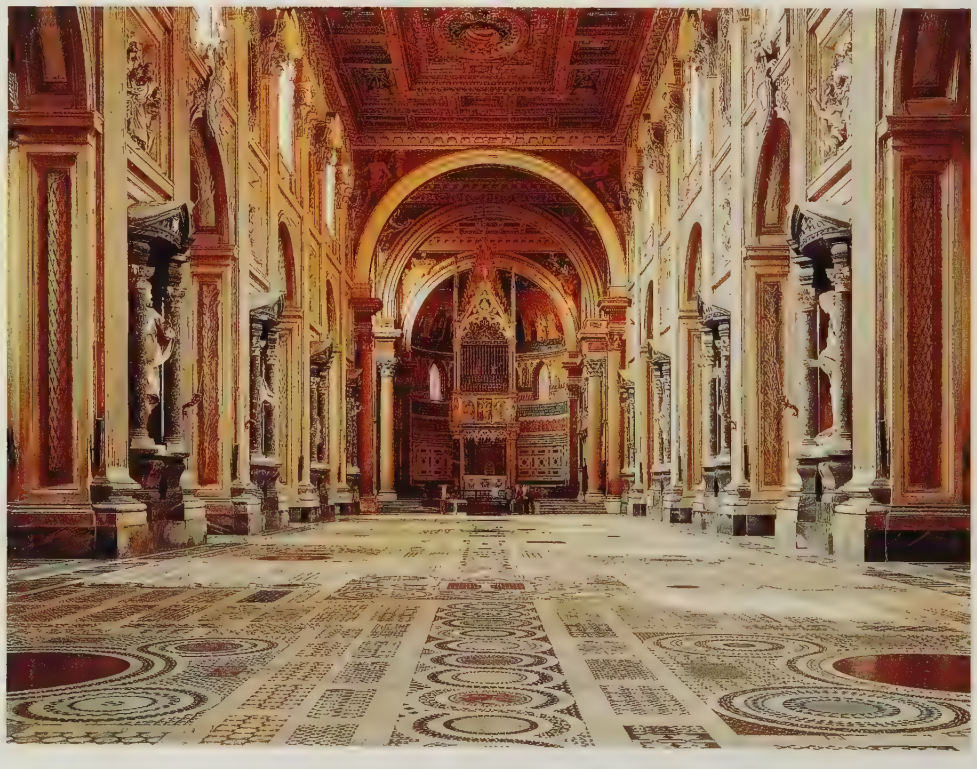
Where Bernini aimed at grandeur through regularity, Borromini tried to astonish the viewer with unexpected effects. But his work goes beyond this: every element displays an inventiveness, creativity, and originality that contrast with traditional idioms. In this sense, Borromini is at one with the Michelangelo of the Porta Pia—to which he paid direct homage moreover in borrowing the Ionic "merlons" around the cupola of Sant'Ivo. His freedom with respect to the rules of Vitruvian language (still

Francesco Borromini,
Rome, Sant'Ivo alla Sapienza
44. lantern.
45. cupola.

46

47

46.
Francesco Borromini,
Oratorio di San Filippo Neri,
Rome, façade.
47.
Francesco Borromini,
Collegio di Propaganda Fide,
Rome, entrance.
48.
Francesco Borromini,
Cappella dei Re Magi, Collegio
di Propaganda Fide, Rome, vault.
49.
Francesco Borromini,
St. John Lateran, Rome,
interior view.



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50.
Francesco Borromini,
Collegio di Propaganda Fide,
Rome, detail of a base.

adhered to after all by Bernini) was expressed as much through the creation of original forms—the capitals of the façade of San Carlo, the Colossal pilasters at the Collegio di Propaganda Fide, the helical lantern at Sant'Ivo—as in the distortions affecting canonical elements—inverted scrolls on the "Corinthian" capitals at Sant'Ivo (perhaps inspired by antiquities from the Villa Adriana in Tivoli), the cylindrical plinths for the interior columns at San Carlo—and, finally, by their metamorphosis into sculpture. Often though, these formal inventions were in perfect accord with the boldness of the overall approach: thus, the hollow and filled moldings on the bases can meet seamlessly, without the fillet that separates them in more orthodox models **[50]**; similarly with the curves and counter-curves in the design for a façade; the uneven grooving of the pilasters in Sant'Ivo or San Giovanni reflects rhythmical inequalities in the elevation.

Extraordinarily inventive in both the overall lines and the sophisticated details, Borromini was the most groundbreaking and creative of the Roman architects of the 17th century. But as such, his success has proved a two-edged sword; he was an artist who shocked theorists and critics, to the point of embodying (together with Michelangelo)—even in the France that admired Bernini—an architectural *libertinage* whose extravagances were to be lambasted by intransigent critics such as Fréart de Chambray. On the other hand, his extreme sense of plasticity and dynamism, and, above all, the freedom he displayed made a profound impact on the exuberant architecture then flowering in the Catholic world—in Italy itself, but also in the Iberian peninsula and its colonies, in Central and Eastern Europe, and even as far as Russia.

Rome in the 18th century

The creative drive ignited by the generation of Bernini and Borromini began to peter out toward the end of the 17th century. However, the election of Pope Clement XI Albani in 1700 gave new impetus to building activity. Significantly, it is to this well-read and art-loving pontiff that we owe the completion of the palaces of the Belvedere—started two centuries earlier by another pope whose role in the history of art was capital, Julius II. The most active architect in this period was Carlo Fontana (1638–1714), the designer of the splendid concave façade of San Marcello al Corso (1683), heir to the esthetic principles of the Seicento, and of the Cappella Albani in San Sebastiano fuori le Mura (1707–12), where the plinths, capitals, and entablature of the order are all nods to Borromini. With the portico of Santa Maria in Trastevere (1702), which kept the church intact, and the rebuilding work at Santi Apostoli (1703 on), where he preserved the portico, Fontana did much to advance the great restoration program of the old Christian basilicas that was to gather pace over the succeeding years.

His son Francesco (1668–1708) continued in the same style, providing for example the façade of Santa Maria della Neve (1706) with a characteristically swelling convex zone, as well as a complex plan for a pediment and an order of abstract form. Fontana was, however, unable to carry out his project for the port of Ripetta, whose rebuilding had been decreed in 1703. It was the architect Alessandro Specchi (1666–1729) who was put in charge, designing a square and a dynamic flight of curved stairs that descended to the Tiber (no longer extant). The immediate successors of Clement XI, Innocent XIII, and Benedict XIII continued their predecessor's plans, and during their

pontificates various masterpieces were erected, such as the staircase leading from the Piazza di Spagna to the church of Santa Trinità dei Monti. This long-cherished project, to which Bernini had turned his attention, had been shelved for political reasons because it involved at the same time the pope, the king of France for the Trinity, and the king of Spain for the square, a network of touchy egos that had to be handled with kid gloves. It was only under Louis XV that between 1723 and 1726 the architect Francesco de Santis (1679–1731) constructed the majestic and theatrical stairway that is today one of the chief tourist sites in Rome. Just as virtuosic if less spectacular was the laying out by the Neapolitan Filippo Raguzzini (c. 1680–1771) of the little Piazza Sant'Ignazio in front of the church of the Jesuits, designed from 1727 in the manner of a curved backdrop, supplemented by lanes like the wings of a theater. The same architect also built churches with an undulating decor, such as Santa Maria della Quercia (1727–31).

The second quarter of the 18th century was just as fruitful. Although Clement XII and Benedict XIV faced serious financial hardship, a number of splendid palaces arose in Rome, such as the Palazzo Doria Pamphili, between 1731 and 1734, by Gabriele Valassori. Above all, quite a few major projects were finally completed: the world-famous Fontana di Trevi, begun in 1732 by Nicola Salvi[see chapter 1, fig. **3**], and San Giovanni dei Fiorentini, whose façade was finished in 1735 by the Florentine Alessandro Galilei. The same Galilei provided St. John Lateran with a powerful Colossal order frontage, a variant of Michelangelo's formula at the palace at the Capitol. The Major basilicas were completed in the same years: Santa Croce in Gerusalemme was endowed with a façade, a majestic amplification with a Colossal order of Pietro da Cortona's work at SS. Luca e Martina (1741–43), by Domenico Gregorini, while Ferdinando Fuga (1699–1781) completed Santa Maria Maggiore with a singular frontage over two levels, half church façade, half palace front. At the time, Fuga was making a name for himself in Rome, where he built the façade of Palazzo della Consulta on Piazza del Quirinale (1732–38), the Palazzo Corsini on Via della Lungara, the church of Sant'Apollinare (from 1744 on), and the small sanctuary with an oval plan and still Michelangeloesque façade of Santa Maria dell'Orazione e della Morte on the Via Giulia (1733–37). Fuga later left to pursue a profitable career in Naples.

Baroque Italy

Northern and central Italy

The general situation in northern and central Italy in the 17th century was not a priori favorable to major advances in architecture. The seizure of the Milan region by the Spanish, the weakness of the Republic of Genoa—nominally independent but under de facto Spanish rule—the demotion of the power of the Grand Duchy of Tuscany under the later Medici and, in the 18th century, under the House of Lorraine, did little to further substantial projects, all the more so since there was an underlying economic crisis and plague epidemics repeatedly devastated the region. In Florence, more ephemeral projects and structures were designed than actual buildings. At the beginning of the century, the style remained Mannerist and was marked by the great names of the late Renaissance, Ammannati, Buontalenti, and Vasari, and especially by the huge shadow cast by Michelangelo. The only major project was the Cappella dei Principi, the funerary chapel of the Medici built in line with the choir of San Lorenzo, and which, according to the original plan, should have been linked to Brunelleschi's church. In spite of the participation of the most representative artists of Ferdinando's reign—Giovanni de' Medici, Alessandro Pieroni, Matteo Nigetti, and the aging Bernardo Buontalenti—this vast, somewhat ponderously decorated construction does not succeed in making its mark in a city so well endowed with masterpieces. As the century wore on, the enlargement of the Palazzo Pitti in two phases (1620 and 1631) progressed under the direction of Giulio Parigi, selected in preference to Pietro da Cortona, the latter being restricted to the interior decor. Gherardo Silvani (1579–1673), the major architect of the time in Tuscany, produced some interesting monuments, in particular the church of San Gaetano in Florence, which has a richly decorated façade of Roman type with sculptures in powerful relief.

More was built in Milan, where the presence of Carlo Borromeo was still having an impact, though root-and-branch novelty was limited. Fabio Mangone (1587–1629) was the most representative of those architects who, remaining stylistically faithful to the lessons of Pellegrino Tibaldi, endeavored to implement the precepts of the canonized archbishop. These principles, however pertinent from a religious point of view, hardly favored innovation, unless they were alloyed to genius, as they were with the great Roman artists after 1630. Lorenzo Binago (1554–1629) was surely the most

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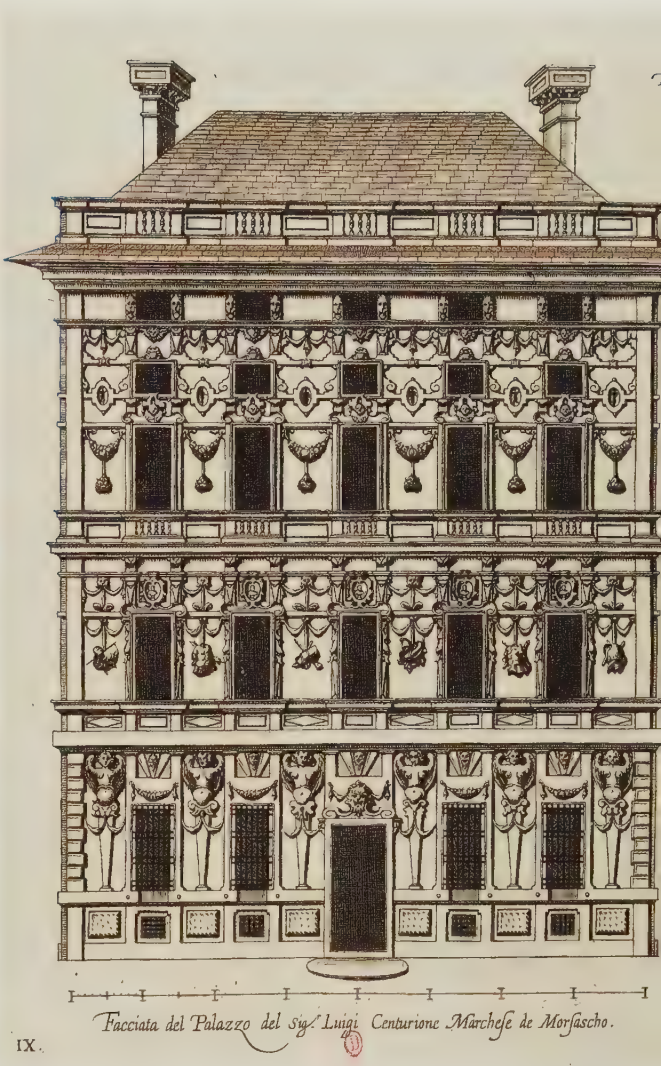

52

51.
Francesco Maria Ricchino,
San Giuseppe, Milan, façade.
52.
Palazzo Lomellino,
Genoa, façade (Peter Paul Rubens, *Palazzi di Genova*, Antwerp, 1622, II, pl. 27).

original. Sant'Alessandro in Milan, his masterpiece, begun in 1601 and still being toiled over sixty years later, is the largest church in the city. The plan, consisting in a Greek cross elongated down its principal axis by a domed choir and terminating in an apse, is a successful compromise between central and longitudinal layouts during a period when the problem was a thorny one in Rome at St. Peter's. The greatest Milanese architect in the first half of the century was without question Francesco Maria Ricchino (1584–1658), who began his career in the service of Carlo Borromeo. After a time in Rome where he completed his training, for many years Ricchino acted as architect to the cathedral, one of the highest positions in Milan. He drew up a plan for the façade, never carried out, providing conclusive proof of his talent at San Giuseppe in 1607. The frontage, of Roman type, over two rows of unequal breadth, borrows several notes from the architecture of Della Porta and Maderno, such as the powerful scrolls unifying the two floors, and the encased pediments on the upper reaches **[51]**. The plan on the other hand presents no connections with Roman formulae and is closer to the solutions preferred in the north. Like Sanmicheli at Madonna di Campagna in Verona, or like Binago at Sant'Alessandro, Ricchino laid several centered volumes along a main axis, the first octagonal and the second square, leading to a high altar located at the end of the building. The massive columns demarcating the interior

accentuate its plasticity. In addition Ricchino designed the very interesting façade of the Collegio Elvetico of Milan (1627), where the Michelangeloesque motifs for the apertures adorn a concave front—a formula destined for a brilliant future throughout Baroque Italy. Thereafter, production seemed to slow down. Two significant palaces deserve a mention: Palazzo Litta (1743–60) by Bartolomeo Bolli, remarkable for an impressive staircase designed by Carlo Giuseppe Merli (died 1743), and the Palazzo Cusani by the Roman, Giovanni Ruggieri.

Bologna, which then formed part of the Papal States, was marked by the presence of the Barnabite priest and architect Giovanni Ambrogio Magenta (1565–1635) from Milan. A skillful mathematician and friend of Cassiano dal Pozzo, this brilliant mind rose to become general of his order in 1612. Although his plans for the cathedral of San Pietro in Bologna were not fully carried out, he left a splendid testament to his abilities at the church of San Salvatore built between 1613 and 1622. Inspired by the vast volumes of the ancient thermal baths and sensitive to the monumentality of Lombard precedents such as the church of San Lorenzo in Milan, he conferred undeniable majesty on a church interior marked by strongly projecting grooved columns along the walls.

In Genoa, it seemed enough to repeat the models perfected at the end of the 16th century by Galeazzo Alessi and Rocco Lurago, who knew how to make the most of the city's sloping sites. In 1616, the plan and decoration of the Strada Nuova were adopted by Bartolomeo Bianco (c. 1590–c. 1667) for Via Balbi; in the 1630s, the same architect also designed a new college for the Jesuits, now the university. But in the 17th century, the capital of Liguria's reputation was based less on the originality of its architects than on that of Rubens, who resided there in 1605–06, publishing in 1622 *I Palazzi di Genova*, a collection of engravings depicting the finest palaces in the city **[52]**.

Baroque Venice?

In the field of the arts, Venice has always enjoyed a place apart. Relatively impervious to the opulence of the Roman grand style, the Serenissima developed a highly original Baroque, whose key characteristics were derived from the weighty Palladian heritage transmitted by Vincenzo Scamozzi at the turn of the century. His churches, which remained equally responsive to the demands of the Counter-Reformation, imposed not only their own style and structures, but also a restraint in ornamentation to which more or less every architect active in Venice adhered. In addition, the civil architecture of the City of the Doges remained just as tributary of the seminal examples of the Renaissance, be they the villas of Palladio on Terra Ferma or the palaces of Jacopo Sansovino in the city itself.

The 17th century was dominated by the talented personality of Baldassare Longhena (1598–1682). A disciple of Scamozzi's, the architect also subscribed to the tradition of Sansovino. The Palazzo Morosin dal Gardin a San Canciano (begun in 1644), and more especially Ca'Pesaro (begun in 1648 and completed by Antonio Gaspari), his main realization in the secular sphere, took as their starting point Sansovino's Ca'Corner, repeating the formula of the rusticated plinth bearing two banks of orders **[53]**. With its diamond facing **[54]**, however, Longhena's rustic work is more

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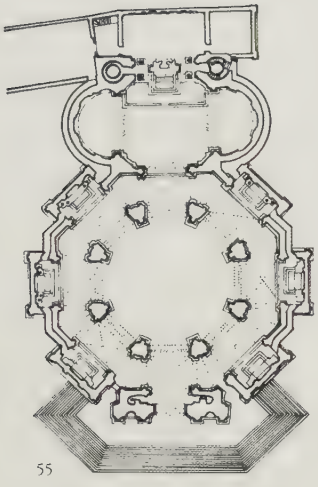
54

Baldassare Longhena,
Ca'Pesaro, Venice,
53. façade.
54. rustic work detail.

refined, and the articulation of the central zone more thoroughly thought through. The plan organized around the vast central space of the traditional *portego* also keeps to the Venetian tradition. These characteristics are found, with slight variations, in the last palace built by Longhena, commissioned in 1667 by Filippo Bon and known by the name of Ca'Rezzonico.

Longhena's masterpiece is the votive church of Santa Maria della Salute, which was built at the entrance to the Grand Canal after a plague epidemic **[56]**. Started in 1634 and dedicated in 1687, the edifice presents a plan adapted to the ceremonies performed each year for the Venetian Senate: the polygonal main space, endowed with an ambulatory, leads to the choir flanked by two hemicycles, reminiscent of those in Palladio's Il Redentore church, with each of these spaces being covered by a cupola **[55]**. This plan—an ingenious compromise between centered and lengthwise structure—was inspired by models from northern Italy, such as Michele Sanmicheli's plan for Madonna di Campagna in Verona. Other examples from the beginning of the 17th century would include San Giuseppe in Milan and Santa Maria di Canepanova in Pavia. But Longhena's work is distinguished from earlier achievements by its far vaster dimensions, the more complex articulation of the interior volumes, the generous daylight that pours through the Diocletian windows, and its sense of theatricality. The church's position at the end of the Grand Canal highlights in particular the dome girded by scrolled buttresses, a unique silhouette that makes it one of the most eye-catching landmarks in Venice. The façade, made up of a triumphal arch with engaged columns, is imbued with singular plastic power and appears as the counterpart to San Giorgio Maggiore that lies opposite the mouth of the Canal. The thermal windows are yet another reference to the architecture of Palladio, but the movement the reliefs and statues confer on the Salute contrasts strikingly with the serenity of the elder's work. The church's domes and the bell towers are admirably supplemented and enhanced by the construction of the Dogana del Mar (1677–82) by Giuseppe Benoni. Longhena also designed the church of Santa Maria di Nazareth, or degli Scalzi (1654 on), whose front, exceptionally in marble and closer to Roman models (the order of the Discalced Carmelites is of Roman origin), was designed in 1672 by Giuseppe Sardi (1624–1699).



55

Baldassare Longhena,
Santa Maria della Salute, Venice,
55. plan.
56. exterior.

Sardi, though born in Venice, was the son of a mason originally from Ticino—birthplace of both Maderno and Borromini. Having been promoted as the city's head architect on the death of Longhena, he designed the sculptural façade of Santa Maria del Giglio (1678–83), where the decoration, though very extensive, nonetheless remains more coherent than that on the façade of the nearby San Moisè, superabundantly ornamented by the architect Alessandro Tremignon (from 1668).

However, these attempts to acclimatize such a flowery style to Venice did little to obliterate the spirit of Palladio, which, toward the end of the 17th and in the 18th century, became more potent still. The Palladian theme of the great triumphal arch surmounted by a pediment was once again the inspiration behind the temple-front of San Stae (1710) on the Grand Canal by Domenico Rossi, and Santa Maria del Rosario, or church of the Gesuati (1726–43), by Giorgio Massari. Meanwhile the *topos* of the portico with colonnade Palladio had employed in his villas and at the chapel in the Villa Barbaro at Maser resurfaced at San Nicolò da Tolentino (started in 1706), designed by Andrea Tirali, and in San Simeone Piccolo, which today greets passengers emerging from Venice train station (Gianantonio Scalfurotto, 1713–29). The conception

57

of volumes in Il Redentore inspired plans for the church of the Jesuits (the Gesuiti; 1713–29), also by Rossi, those of Gesuati and of San Simeone, even if the circular principal space refers more directly to La Salute. As for Sansovino's ideas, they inspired the façades of Palazzo Corner della Regina (Domenico Rossi, from 1724) and, later in the century, Palazzo Grassi (Giorgio Massari, 1747). Venice was in consequence well prepared to heed the Neoclassical doctrines of the theorist Carlo Lodoli.

Piedmont and the Savoy dynasty

Long occupied by the French, the Piedmont was less exposed to the artistic currents of the Renaissance. In the 17th century, on the other hand, under the impetus of the dynasty of the dukes of Savoy, kings of Sardinia following the treaty of Utrecht in 1713, the region gained a new vitality. The creation and strengthening of a centralized monarchical state demanded the establishment of a powerful administration, which, in the field of architecture, relied on an effective body of military engineers. Piedmont thus obtained a network of fortresses, while Turin, its capital since 1563, was fortified, enlarged, and embellished in accordance with

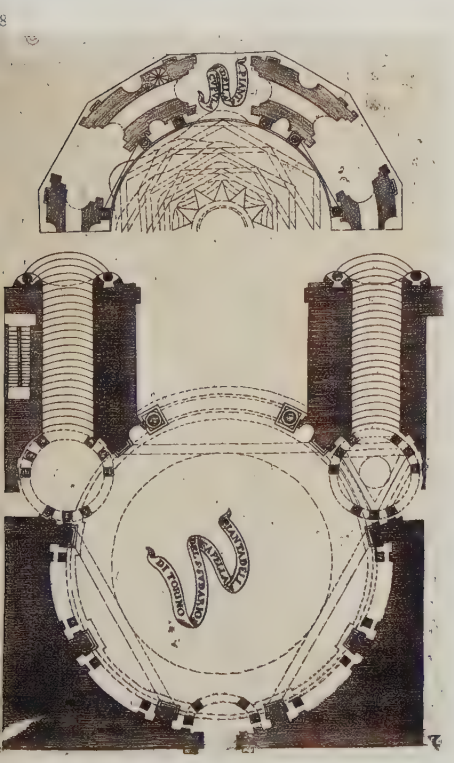
contemporary principles of urban regularity championed by the *ingeniere architetto capitano*, Ascanio Vitozzi (1539–1615).

An arrangement of perpendicular thoroughfares redolent of ancient town planning was laid out starting from the two principal squares, Piazza del Castello, dominated by the ducal, then royal, Palazzo—whose construction extended over the entire first half of the century, concluding with the current frontage built by Carlo Morello in 1658—and the Piazza Reale (today Piazza San Carlo), begun in 1637 under the direction of Carlo da Caselmonte. Piedmontese architecture, however, found its most original expression in the hands of two masters of very different temperaments, the churchman Guarino Guarini (1624–1683) and Filippo Juvarra (1676–1736).

The universal talents of the Theatine priest Guarini included philosophy and mathematics, and he was particularly interested in the theory of conic sections, a specialty not unconnected with his architecture. Trained in Rome, he was impressed by the achievements of his elder colleague Borromini, whose creative freedom he shares. The interplay of opposing curves so dear to Roman architecture is treated on a monumental scale in the Palazzo Carignano, whose daring brick frontage is enlivened by an idiosyncratic décor (1680) **[57]**. Guarini's genius comes over still more forcefully in his religious projects, at the church of San Lorenzo (1668–87) and at the chapel of the San Sindone (the Holy Shroud) in the cathedral (1668–94). Hidden behind the façade of a building on Piazza Reale, only the upper reaches of the exterior of San Lorenzo are visible today, with its drum, flattened dome in the style of Sant'Ivo alla Sapienza, and lantern. Within, visitors enter a sanctuary of octagonal plan whose corners are tempered by projections in the form of circular arches, a feature once again reminiscent of Borromini's Roman church, with an oval choir down the main axis. Two original cupolas cover these spaces, structured by thick intersecting ribs which above the choir form a star of David and above the main body a hexagon echoing the ground plan. Borromini also had a predilection for this type of ribbed covering that emphasizes structure to the detriment of surface, as in a Gothic vault. The chapel of the San Sindone, which was a reworking of an existing rotunda, strikes one initially by its triangular structure: the cupola is borne on three pendentives supported by three pillars **[58]**. Although self-evident, this homage to the Trinity is nonetheless original; one might be surprised that such a design was never taken up in the Renaissance, with its predilection for symbolic allusion. At the same time, each level possesses a rhythm of its own: the three arches support a drum pierced by six large windows, while the cupola leads to a lantern opened by twelve smaller ones. The decorative treatment of the dome produces a truly extraordinary effect: the interior is made up of banks of small arches and is enhanced by extremely sophisticated lighting. Extraordinarily complex and rich, the dazzling overall effect is reminiscent of Flamboyant Gothic **[59]**. The detail of the architectural vocabulary, the columns, capitals, and entablatures, epitomize the unbridled inventiveness characteristic of Guarini. This proved the source of his success and, in other climes, of his failures alike: his project for the church of Sainte-Anne-la-Royale in Paris provoked indignant criticism among the French, outraged at such extravagance **[60]**.

From Borromini, Guarini borrowed the principle of stylistic freedom. The models of the orders in his treatise (*Architettura Civile*), published after his death in 1737 by

57.
Guarino Guarini,
Palazzo Carignano, Turin, façade.
58.
Guarino Guarini,
plan of the Cappella della Santissima Sindone, cathedral, Turin, (*Architettura civile*, Turin, 1737, pl. 2).



59

59.
Guarino Guarini,
Cappella della Santissima Sindone, cathedral, Turin, the cupola.
60.
Guarino Guarini,
plan for Sainte-Anne-la-Royale, Paris, (*Architettura civile*, Turin, 1737, pl. 10).

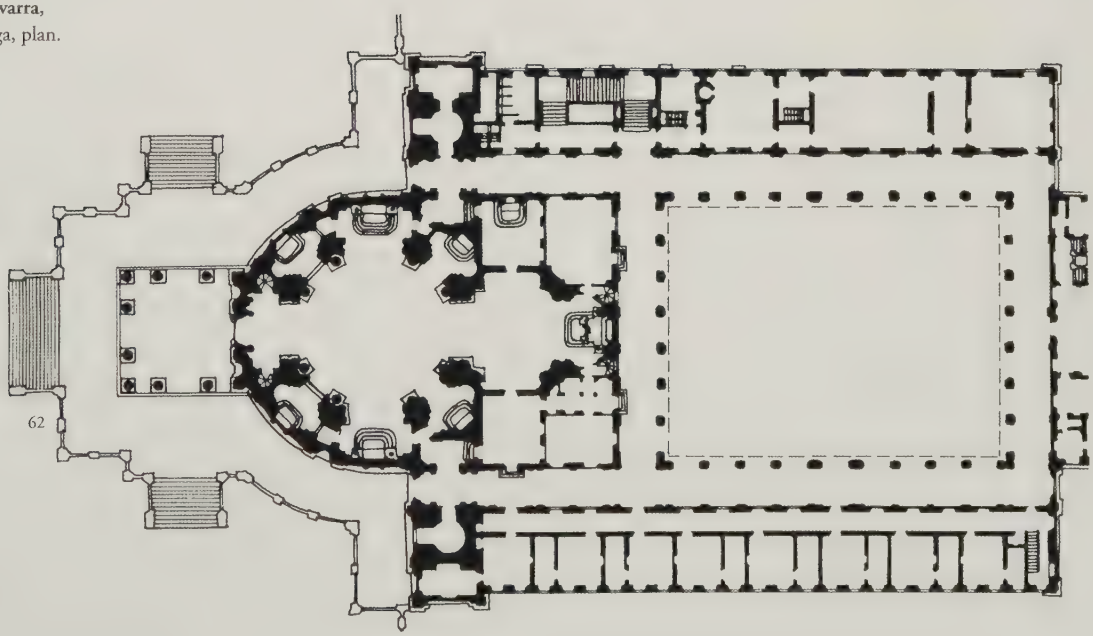
Bernardo Vittone, are of astonishing variety and proclaim blissful indifference to Vitruvian norms, in terms both of form and proportion. In practice, at the Palazzo Carignano he deployed entablatures of novel composition, perfectly adapted to the brick used, while in the vestibule he placed columns with protruding ribbing quite alien to any classical language. Guarini's reputation extended far beyond the confines of the Piedmont, as testified by plans in his treatise for the chapel of Saint-Gaétan in Nice, carried out, with modifications, by Vittone (today the chapel of Miséricorde or the Pénitents Noirs), for Sainte-Anne-la-Royale in Paris [see chapter 1, fig. **11**], and for the no longer extant Santa Maria della Divina Provvidenza in Lisbon. In each case, Guarini delighted in composing astounding plans, the result of combinations of circular or oval surfaces generating dynamic and unusual interior spaces which, in the 18th century, were taken up with glee by architects in southern Germany.

Filippo Juvarra, originally from Messina, trained in Rome under Carlo Fontana. Endowed with a fertile imagination and a vast culture receptive to all the European arts had to offer, he might have become the leading architect of Rome had he not been summoned to Turin in 1714 by the new king of Sardinia, Vittorio Amedeo II. He then became the chief architect at the court of Savoy and did much to complete the urban fabric of the capital of Piedmont (the military zone of the Porta Susa, 1716) and adorn it with prestigious monuments worthy of what was now a fully royal capital: the staircase and façade of the Palazzo Madama (1718) **[65]**, the Castello di Rivoli, and the Veneria Reale, as well as several remarkable churches.

The basilica of Superga, erected between 1715 and 1718 on a hill looking over Turin, was designed as a mausoleum for the Savoy dynasty **[61]**. Its plan combines several different spaces laid out along a longitudinal axis: a strongly projecting portico engages with a rotunda the rear of which opens into the domed choir, itself extended by an apse that houses the high altar **[62]**. This variety in volume, accentuated by a sophisticated lighting system, harks back in part to Palladio's work or to 17th-century French experiments, to François Mansart's chapel of the Visitation for example, all the more so since, in the main rotunda, the cupola rests directly on a wall of circular plan, without pendentives, which, for buildings of large size, was a solution more frequently adopted in France than in Italy. The church leads to a large rectangular cloister, around which all the buildings in the complex are arranged. The elevations compound various influences: the portico with columns carrying the pediment is an obvious allusion to the Pantheon of Rome, though it may express the influence of Palladio (the chapel at Maser). However, it is distinguished from these precedents by the way it protrudes from the fabric (its plan is almost square). Above there rises a dome whose drum, with its coupled columns serving as a buttress and a ribbed cupola, evokes great Roman examples such as St. Peter's, Sant'Andrea della Valle, or San Carlo al Corso. As for the more agitated forms of the bell towers that flank it, they seem more in line with Borromini. Its exceptional site makes this structure imbued with influences even more spectacular. This mix of tradition and innovation characterizes the churches Juvarra built in Turin proper, for example San Filippo Neri (1715–30) and the Chiesa del Carmine (1732–36), whose longitudinal barrel-vaulted naves offer solutions to the treatment of volume and the arrangement of openings, creating highly original lighting (large oval bays in the lunettes at San Filippo Neri, the individual illumination of the oval side-chapels and the choir at the Carmine).

61

61.
Filippo Juvarra, the basilica of Superga. Color engraving, anonymous, Museo del Risorgimento, Turin.
62.
Filippo Juvarra, the Superga, plan.



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63.
Filippo Juvarra,
Palazzina di Stupinigi, interior.
64.
Filippo Juvarra,
Palazzo Madama, Turin, stairway.
65.
Filippo Juvarra,
Palazzina di Stupinigi,
central building.

The most representative of Juvarra's civil projects was the hunting lodge of Stupinigi (from 1729) southwest of Turin **[63]**. The strongly hierarchical elevation emphasizes the central section, which is crowned by a small dome topped by the statue of a stag and framed by wings that decrease in height. The very singular plan offers the principal range in the shape of a cross of St. Andrew extended by a vast hexagonal court that recalls Renaissance restitutions of the port of Trajan at Ostia. The interior decoration is extremely opulent: the great royal *salone* located where the arms of the cross intersect rises the whole height of the building and is abundantly lit by two semicircular arched bays; the painted decoration on the cupola and the spaces disengaged by the architectonic structure of superposed pilasters blends with a wealth of consoles, scrolls, and balconies of essentially round form **[64]**. Juvarra's fame spread far beyond the borders of Piedmont and his buildings were appreciated in all Europe. He ended his career in Spain in the service of Philip V, who called him to Madrid in 1735 to rebuild the Royal Palace (Palacio Real) that had been destroyed by fire the previous year. Juvarra was prevented from realizing his project, however, by his untimely death in January 1736.

The work of Bernardo Vittone (1702–1770) paradoxically combines the cogency of Juvarra with Guarini's flights of fancy. In 1737, the Piedmontese artist, who had developed in the environment of the building sites of Stupinigi and Superga, was made responsible for the posthumous publication of Guarini's treatise, *Architettura Civile*. His first and perhaps most telling creation was the Cappella della Visitazione in Vallinotto, not far from Carignano (1738–39). The exterior is of a sobriety worthy of Juvarra,

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66.
Bernardo Vittone,
Cappella della Visitazione,
Vallinotto (Carignano).

Giuseppe Cino
and Giuseppe Zimbalo,
Lecce, Santa Croce,
67. façade,
68. detail of the façade.

but the interior, evocative of the extraordinary spaces of Guarini, offers a total change: the diaphanous intersection of the dome ribs reveals two nesting cupolas with the vault of the lantern at the summit **[66]**. Such contrasts are characteristic of Vittone's essentially ecclesiastical oeuvre: Santa Chiara in Brà (1742), Santa Maria di Piazza in Turin (1751–54), and Santa Croce de Villanova di Mondovi (1755).

Southern Italy and Sicily

In spite of recurrent economic difficulties and an uncertain political situation under the domination of the Spanish viceroys, the 17th century was a glorious period for architecture in southern Italy. The region of Puglia and the city of Lecce, for instance, witnessed a meteoric rise under Spanish domination. In the second half of the 16th century, the city acquired new walls, a citadel, and a hospital. The new religious orders settled there, and churches mushroomed, making Lecce one of the most spectacular cities in all Italy. The church of Santa Croce is representative of an idiosyncratic and exuberantly ornamental style, adorned by a façade on two levels that remains preeminently classical in structure **[67** and **68]**. Begun in 1549 by Gabriele Riccardi (fl. 1549–82), this façade was erected in two stages: the ground floor was built in 1606 by a local artist, Francesco Antonio Zimbalo (1567–1615), while the upper section

was the creation of another representative of the dynasty, Giuseppe Zimbalo (1617–1720), in 1646. The latter, together with Giuseppe Cino (1644–1722), also designed and decorated the monumental complexes of Piazza Sant'Orenzo and Piazza Duomo: the cathedral (Duomo), the episcopal palace, and the seminary present opulent and dynamic elevations, local adaptations of seminal Roman models. The architectural repertory is interpreted here in a very free manner, contaminated by the omnipresence of sculpture, with an often popular thematic, somewhat reminiscent of the ornamentation of the medieval Romanesque or certain expressive motifs in the Spanish art of the Renaissance, such as the consoles above the column capitals in the cloister of the convent of the Bernardines at Salamanca.

In Naples, capital first of the Spanish viceroys and then of the Bourbon kings, the beginnings of the 17th century were dominated by two foreign architects, the Tuscan Giovan Antonio Dosio (1533–1609) and Domenico Fontana (1543–1607) who, after the death of Sixtus V, had lost his employment in Rome. Now "royal engineer," he took part in some of the greatest projects of the era, in particular the construction of the Palazzo Reale (1600–12). At the same time in Naples there worked a monk from Calabria, Fra Francesco Grimaldi, whose most important composition, the church of San Paolo Maggiore, is remarkable both for its interior layout and for reusing columns

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67

from the ancient temple of the Dioscuri on the site of which the church had been built. But Baroque Naples most strongly bears the imprint of the sculptor and architect Cosimo Fanzago (1591–1678), originally from near Bergamo. Sculptor as well as architect, he developed a highly elaborate schema for the decoration of the Certosa di San Martino, which started under the aegis of Dosio, in particular the splendid doorframes for the cloister **[69]**. He also designed the *guglia* of San Gennaro and built the church of Santa Teresa a Chiaia. With the church of Santa Maria Egiziaca a Pizzofalcone, he adopted a central plan of Renaissance inspiration and a dome taken from that of Sant'Andrea al Quirinale, erecting a convex façade in the manner of Pietro da Cortona **[70]**. The most notable work of his secular output, the Palazzo Donn'Anna a Posilippo, which has unfortunately deteriorated considerably over the centuries, is a sumptuous residence opening on to the bay and hence accessible to boats like a Venetian palace. In the wake of Fanzago, many architects continued to embellish Naples

69.
Cosimo Fanzago,
Certosa di San Martino, Naples,
door to the cloister.
70.
Cosimo Fanzago,
Santa Maria Egiziaca a Pizzofalcone,
Naples, façade.
71.
Luigi Vanvitelli,
Palazzo Reale, Caserta,
general view.
72.
Ferdinando Sanfelice,
Palazzo Sanfelice, Naples, stairway.

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72

during the 17th and 18th centuries, making the city into one of the legendary capitals of the Baroque, with opulent palaces equipped with sumptuous staircases and churches—often preceded by vast porticos towering over wide flights of stairs leading to the nave—as varied as their décor is rich. In constructing Sant'Agostino alla Zecca, the antiquarian and scholar Francesco Antonio Picchiatti (1617–1694) managed to respect the archeological discoveries he had made there to create an extremely original interior space laid out with columns (from 1641).

The productive and omnivorous mind of Fernando Sanfelice (1675–1750) was put to use on many sites started by his predecessors. He drew the small church della Nunziatella, but still more remarkable are the jaw-dropping staircases he built at the Palazzo Bartolomeo di Majo, all virtuoso curves, and the Palazzo Sanfelice (1728), of a splendor unequaled anywhere in Italy **[72]**. In the 18th century, the Kingdom of

the Two Sicilies was dominated by the work of Luigi Vanvitelli (1700–1773), son of a *vedutista* of Flemish extraction, Gaspar van Wittel, who died in Rome in 1675. After some work in Rome (including overdressing the church of Santa Maria degli Angeli that disfigures Michelangelo's work), he entered the service of the Bourbons of Naples, for whom, from 1752 on, he designed the imposing Palazzo Reale at Caserta [**71**]. There, Bernini's models for the elevation—a Colossal order borne on a rusticated plinth—are developed over a quadrangular plan on a scale inspired by the Versailles of Louis XIV. Today, the absence of the high roofs he had envisaged for the corner pavilions mars the impact of this edifice, which thus appears somewhat flat. A monumental staircase with two parallel flights, which vies with the superb stairways then being designed in Germany, at Würzburg and Bruchsal, for example, leads up to the sumptuous interior rooms on the floor above. A vast octagonal vestibule and an immense garden, laid out in line with the slope facing the palace and enlivened with waterfalls and sculptural groups, complete what is a complex unique in Italy.

73

73.
Giovanni Battista Vaccarini,
cathedral, Catania, façade.
74.
Andrea Palma,
cathedral, Syracuse, façade.

Sicily, too, experienced a significant architectural revival, due paradoxically to a string of natural disasters that necessitated the rebuilding of several cities at the beginning of the 18th century, in particular in the east of the island. Yet from the very start of the Seicento, and spurred on by the viceroys, many cities were being improved, as witness the famous example of the crossroads at the Quattro Canti in Palermo, with its four mildly concave frontages adorned with sculpture, a meeting point for the two principal arteries of the city. Messina too benefited from wholesale development in both the city and harbor, but the many earthquakes they were to suffer prevent one appreciating it adequately. In 1693, many cities in the southeast of Sicily were destroyed by a terrible *terremoto*. The subsequent reconstruction work is a testimony to the region's vitality: Catania was almost entirely rebuilt on its original site, while new districts were built in Ragusa, and Noto was re-founded a good distance from the now obliterated old city. These reconstructions were governed by the most up-to-date criteria: regular plans articulated around large squares, as in Catania, where the sequence *Platea magna* (Piazza Duomo) to *Fierà del Lunedì* (Piazza Università) evinces a certain grandeur. More remarkable still was the organization of the new city town of Noto, ascribed to the mathematician Giambattista Landolina Salonia, but whose protracted gestation must surely have involved a number of protagonists. The city was built on the flank of a hill and laid out with respect to three thoroughfares perpendicular to the slope. The main street, in the center, is interrupted by two great squares, the *Area Venalis* (Piazza XVI Maggio) and the *Area majoris Ecclesiae* (Piazza Municipio), where a Chiesa Madre atop a majestic stairway faces the Palazzo Communale. The façades along the secondary streets, perpendicular to these principal axes and thus on a slope, are arranged in a manner that creates extraordinary effects of perspective.

The buildings adorning these new cities present some particular features. The façades of many churches in Palermo are inspired by traditional Roman models, with

75.
Giacomo Amato,
the convent of San Nicolò l'Arena, Catania.
76.
Palazzo Nicolaci, Noto, balcony.

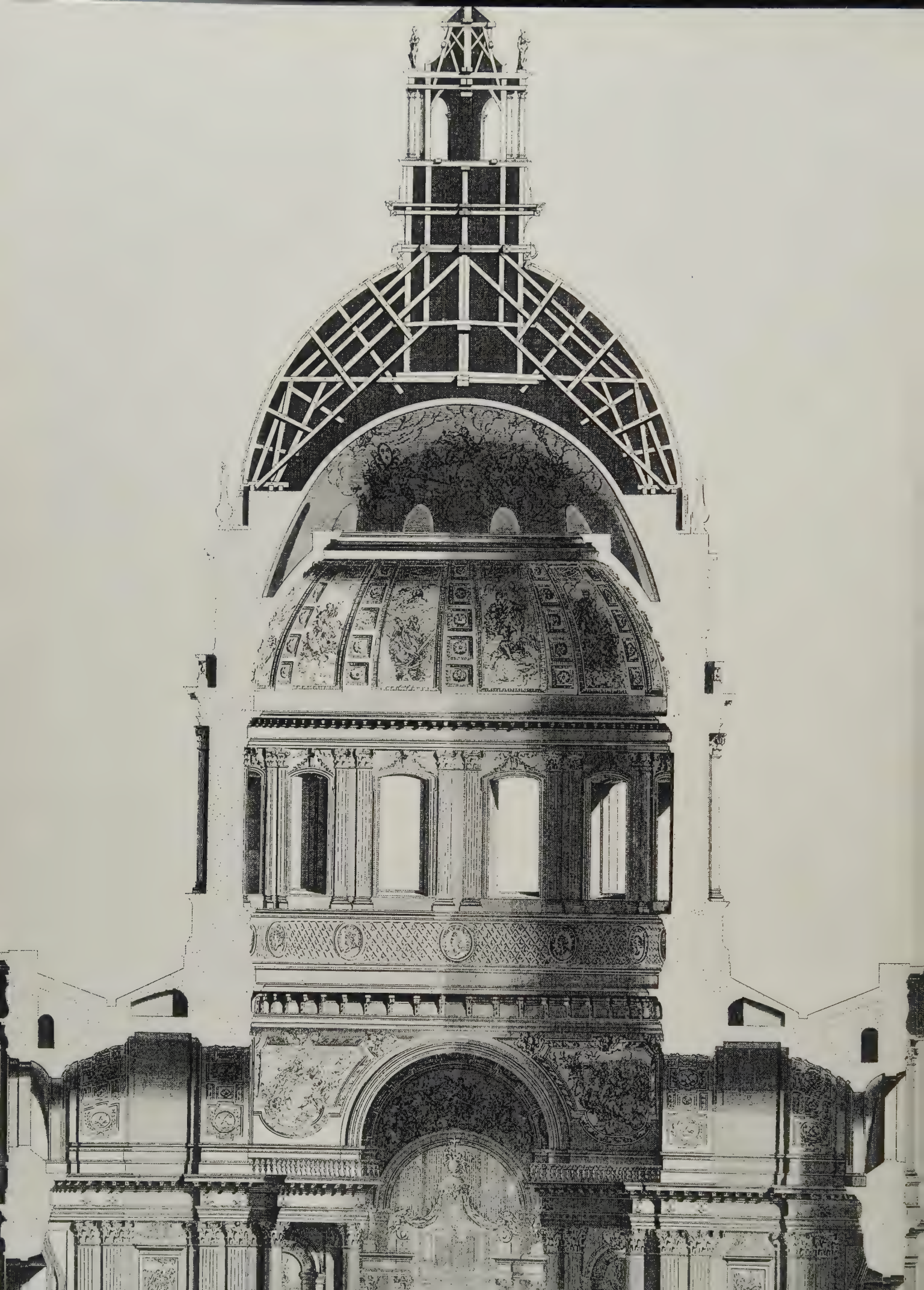
two levels of unequal width (Sant'Ignazio dei Filippini, Chiesa della Pietà), as at the cathedral (Duomo) of Syracuse, where the contrast between a façade with modern columns (Andrea Palma, 1728–54) **[74]** and the antique columns from the Temple of Minerva, encased along the side of the building and within, is surprising indeed. The façade of the Duomo at Catania (finished in 1757) by Giovanni Battista Vaccarini (1702–1768), who was a pupil of Carlo Fontana's in Rome, displays greater originality **[73]**. The rhythm of the supports emphasizes the entrance, while the columns framing the door are canted, turned to 45° with respect to the wall, creating the illusion that the wall against which they lean bends in the middle. Vaccarini greatly influenced the architecture of the city, completing the Piazza Duomo with an obelisk borne on an elephant—an obvious allusion to Bernini's composition in front of Santa Maria sopra Minerva in Rome.

The whole island breathes the influence of Borromini's plasticity: concave volumes appear in the Chiesa del Carmine and at San Carlo in Noto, in San Antonio in Ferla, Santa Maria dell'Elemosina, San Placido, and Sant'Agata in Catania, the Chiesa del Purgatorio in Trapani. But the Sicilians also enjoyed a pronounced taste for façades with convex walls, like those at San Domenico in Noto, at the church of the College of the Jesuits at Modica, and at San Giuliano in Catania. They created moreover a special type in which the rounded forms of the façade support large belfries, emphasized by the often elevated position of the building itself (San Giorgio at Ragusa, San Giorgio at Modica, and the Chiesa Madre at Floridia). As for the decorative elements, they were also readily inspired by Borromini's principles: the "ears" framing the tops of the doors are omnipresent, and, at Sant'Agata in Catania, Vaccarini followed the example of his Roman model with a particularly original design for the capitals.

In general, plans for churches were less extravagant. Santi Cosma e Damiano in Alcamo, designed in 1723 by the Tuscan Giuseppe Mariani (1681–1731)—a hexagon whose sides are treated as semicircular apses prolonged in line with the entrance by a square choir in patent reference to Sant'Ivo alla Sapienza—is exceptional. Sicilian sanctuaries, whether of central or longitudinal plan, tend to possess rather simple interior volumes. The effects are produced by an accumulation of ornaments of diverse forms and colors, striking in terms of their richness and abundance, as in larger edifices, such as the Gesù in Palermo and Santa Maria in Valverde. The foremost representative of this taste is probably the sculptor Giacomo Serpotta (1656–1732), who created many interiors in Palermo, at Sant'Orsola, at the Chiesa delle Stimmate, and in the oratories of Santa Cita and Santa Catarina all'Olivella. The quality of the endless varied stucco sculptures, reliefs, and sculptures in the round that teem over the walls with scarcely credible vitality in the Oratorio del Rosario at San Domenico (1714–17) is especially remarkable.

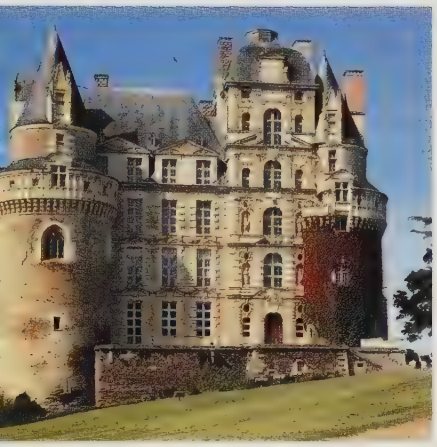
Civil architecture in Sicily can also boast some fine works: the palaces of Catania, in particular, are often impressive, owing much to the contrast between the white stone used for the ornaments and the gray tuff of the walls. Furthermore, the taste for elaborate decoration that occasionally masks staleness in the overall plan is spectacularly evident in the treatment of the pilasters and window furniture, for example at the Palazzo Biscari (from 1701, under the direction of Alonzo di Benedetto and Giacomo Amato), at the Palazzo Valle (Vaccarini), and on the great façades of the convent of San Nicola l'Arena, today the university **[75]**. Elsewhere, as at the Palazzo Rizza at Siracusa, the Palazzo Beneventano in Scicli, and the Palazzo Nicolaci at Noto, the otherwise relatively traditional elevations are animated by rows of splendid wrought-iron balconies borne on elaborately decorated and sometimes grotesque or freakish consoles **[76]**. These residences are graced by magnificent staircases, like that of the Palazzo Bonagia in Palermo, left visible in poignant isolation after the ruin of the building.

Villa architecture developed widely on the outskirts of Palermo, especially in Bagheria, the site of some marvelous examples, including the Villa Palagonia where visitors enter the startlingly original "circumflex" plan by a complicated stairway, and the Villa Larderia, where three rectangular corps are set at the three apexes of an equilateral triangle in which the principal range rises. These luxurious dwellings are adorned with fine gardens completed by richly ornamented eye-catchers, such as the nymphaeum at Villa Trabia di Campofiorito, in Palermo.



3 Architecture *à la française*

Changes in taste



1

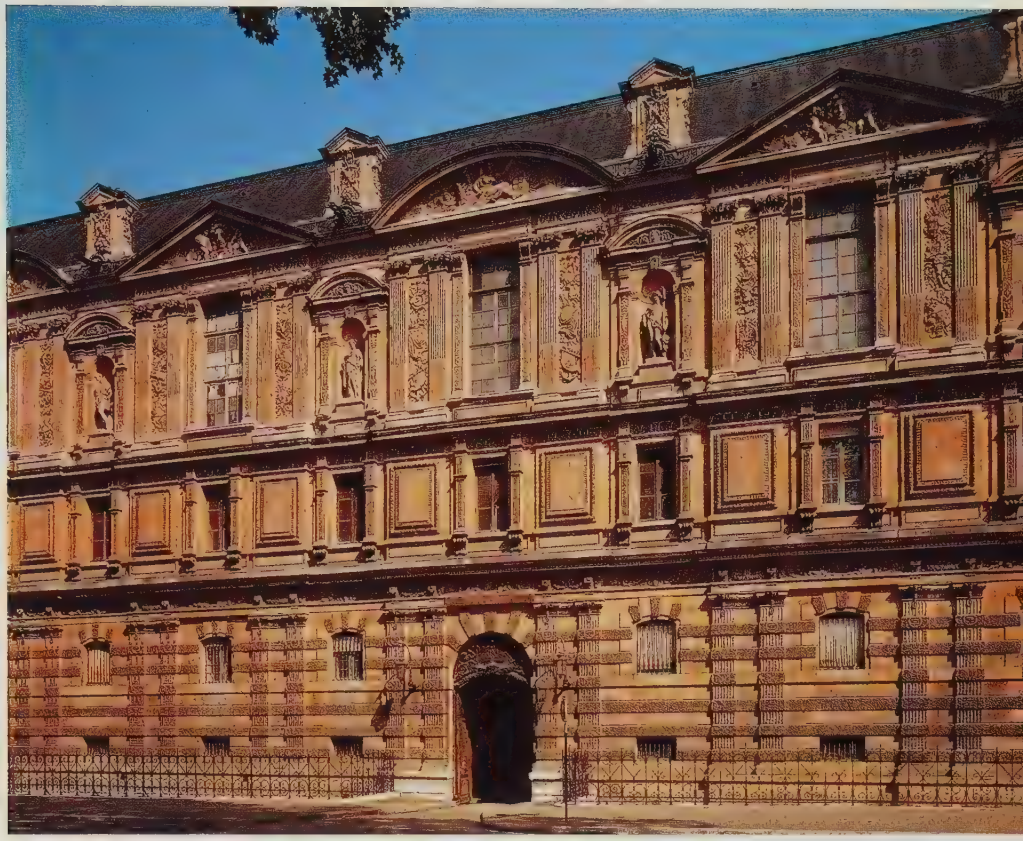
THE 17TH CENTURY witnessed the confirmation of French supremacy. The adroit policies followed by the sovereigns and their ministers made the most of divisions in Italy and Germany and benefited from the crisis in England and a weakening Spain. At the same time the monarchy, in spite of the sporadic setbacks of the two regencies and the upheavals caused by the Fronde rebellion, managed to subdue clergy, nobility, and Tiers État under an absolute authority. This political ascendancy necessarily had positive repercussions on the art of building, and the Church, the prince, and his subjects succeeded in building a great deal. The new religious orders covered the land in convents and churches. In spite of recurrent economic problems and spurred on by the desire of town councils to build, private individuals too erected or improved *hôtels*, and the situation was much the same with the grander châteaux.

Monarchs and ministers vied with each other in ostentation, giving material expression of the glory of French kingship to the rest of Europe. At the same time, they embellished the capital and the larger cities. Henry IV had a passion for building, and, although Louis XIII had little fondness for architecture, his minister Richelieu was hugely interested in it. The wealth and energy Louis XIV expended over Versailles is well known.

The French and the Italians

Artistically, France differed from other European countries through its particular relationship with Italy. During the Renaissance, French architects had endeavored to assimilate the Italian lesson and create a national language; in the 17th century, these efforts were further explored, to spectacular effect.

For this period, it has become customary to oppose the Italian Baroque with French *classicisme*. Compatriots of Racine and Boileau, it is said, were horrified by the excess of the great Italian architects, and so reined in their ornamental language with a sober and noble reserve. The Grand Siècle would have no truck with the "extravagance" of a Borromini or a Guarini, which Mazarin, the Italian minister, endeavored to introduce it into France, at the same time as the opera. But the 17th century should not be confined to the reign of Louis XIV, who only took over the reins of personal power in 1661.



1.
Brissac-Quincé,
Château de Brissac, façade.
2.
Palais du Louvre, Paris,
Grande Galerie.

Previously, the century underwent many vicissitudes, political, religious, and cultural. The literary historian Jean Rousset has even called "Baroque" the poetry which blossomed in the first years of the century—that of Tristan L'Hermite, Saint-Amant,[1] and even the great playwright Corneille. In truth, nothing could be less classical than a play by the author of *L'Illusion comique*, with its complicated plots, incredible adventures, "licentious" structure; nothing could be less restrained or temperate than a funeral oration by Bossuet, where the corpse of the deceased is literally laid out before the audience; nothing freer and more varied than a fable by La Fontaine: one should not forget the moral of *Pâté d'anguille*: "Diversity, that's my motto."

In architecture, the Mannerist taste of the late Renaissance, that of the last Valois, fueled by decorative abundance and stylistic freedom, maintained its position during the reign of Henry IV and that of his son Louis XIII. However, this architectural idiom, which is not in truth the Italian Baroque, was far removed from the idea of classicism. The Château de Brissac, for example, with its monumental entrance pavilion on five levels, with its orders heavy with rustication, its interrupted pediments and dropped keystones, testifies to the fact that at the turn of the century the esthetic underlying the plans for Charleval and Verneuil, such as Jacques Androuet du Cerceau presented them in *Les Plus Excellents Bastiments de France* in 1576–79, had lost little of its currency **[1]**. The Grande Galerie in the Louvre, too, built by one of that artist's sons, Jacques II, also derived from a heavy, elaborate taste unconstrained by rulebooks **[2]**.

At the beginning of the 17th century there developed a style marked not only by the French Mannerism of the heirs to Philibert De l'Orme, but also by an eccentric approach that coexisted with the strictest lessons of the purest Italian theory.

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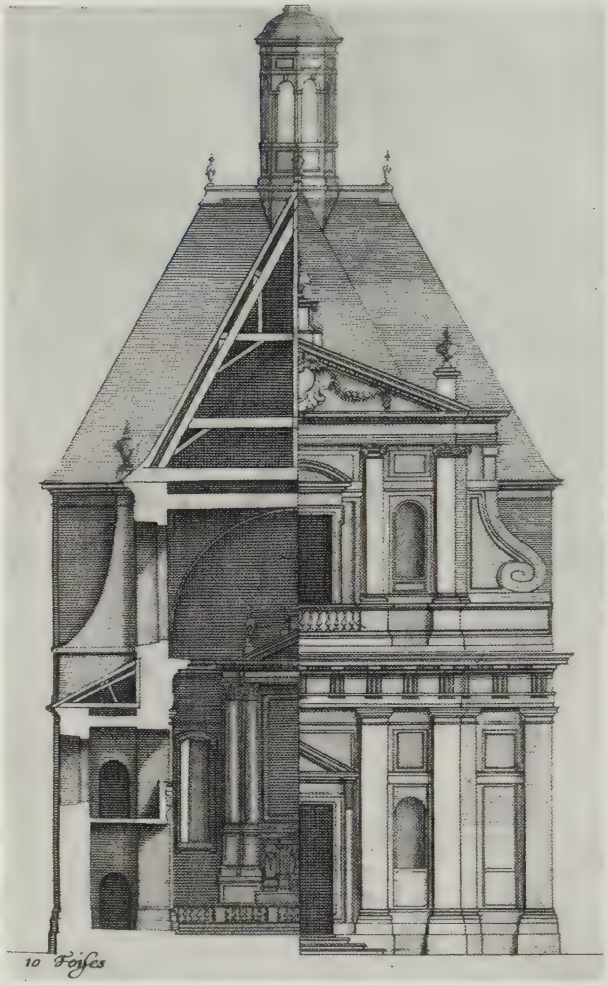
1. *Anthologie de la poésie baroque française*, Paris: José Corti, 1988.



3.
François Derand,
Paris, église Saint-Paul-Saint-Louis, façade.
4.
Étienne Martellange,
noviciate of the Jesuits, after Jean Marot.

The "bibliography" on architecture provided by Louis Savot at the end of his *Architecture françoise* published in Paris in 1624—a treatise moreover packed with judicious advice—is revealing of the eclecticism that then constituted architectural culture: beside Vitruvius, Vignola, and Palladio, mention is made of the Fleming Jan Vredeman de Vries and the Germans Hans Blum and Wendel Dietterlin.

The years 1620 to 1650 saw the publication in Paris of French translations of Vignola and Palladio, but there was also a *Livre d'architecture* by the German Rutger Kasemann (1622) and the *Pièces d'architecture* of the Fleming Pierre Collot (1633). The *Livre d'architecture* (1631) of the Italian-born Alexandre Francine presents a collection of doorways inspired by the most Mannerist of the books of Serlio, the *Libro extraordinario/Livre extraordinaire* (1551). This taste for rustic décors resurfaces in the Medici fountain near the Luxembourg (1620–30). In the same spirit, the façade of Saint-Paul-Saint-Louis, the church of the mother house of the Jesuits in Paris, by Father Derand in conjunction with an anonymous "Flemish" architect, presents a luxuriant décor (cartouches, oblong scrolls, vase flambeaus), promptly criticized by the *Intelligents*, a group of savants who had congregated around the Surintendant des Bâtiments, Sublet de Noyers **[3]**. They lambasted the multiplication of the supports, the projections of the entablature, the broken pediment at the summit, the use of Composite, that "architectural abortion," associated with the Corinthian—all elements condemned by the spokesman of the *Intelligents*, Roland Fréart de Chambray, in his famous *Parallèle de l'architecture antique et de la moderne*, published in 1650. On the other hand, they praised the sobriety of the

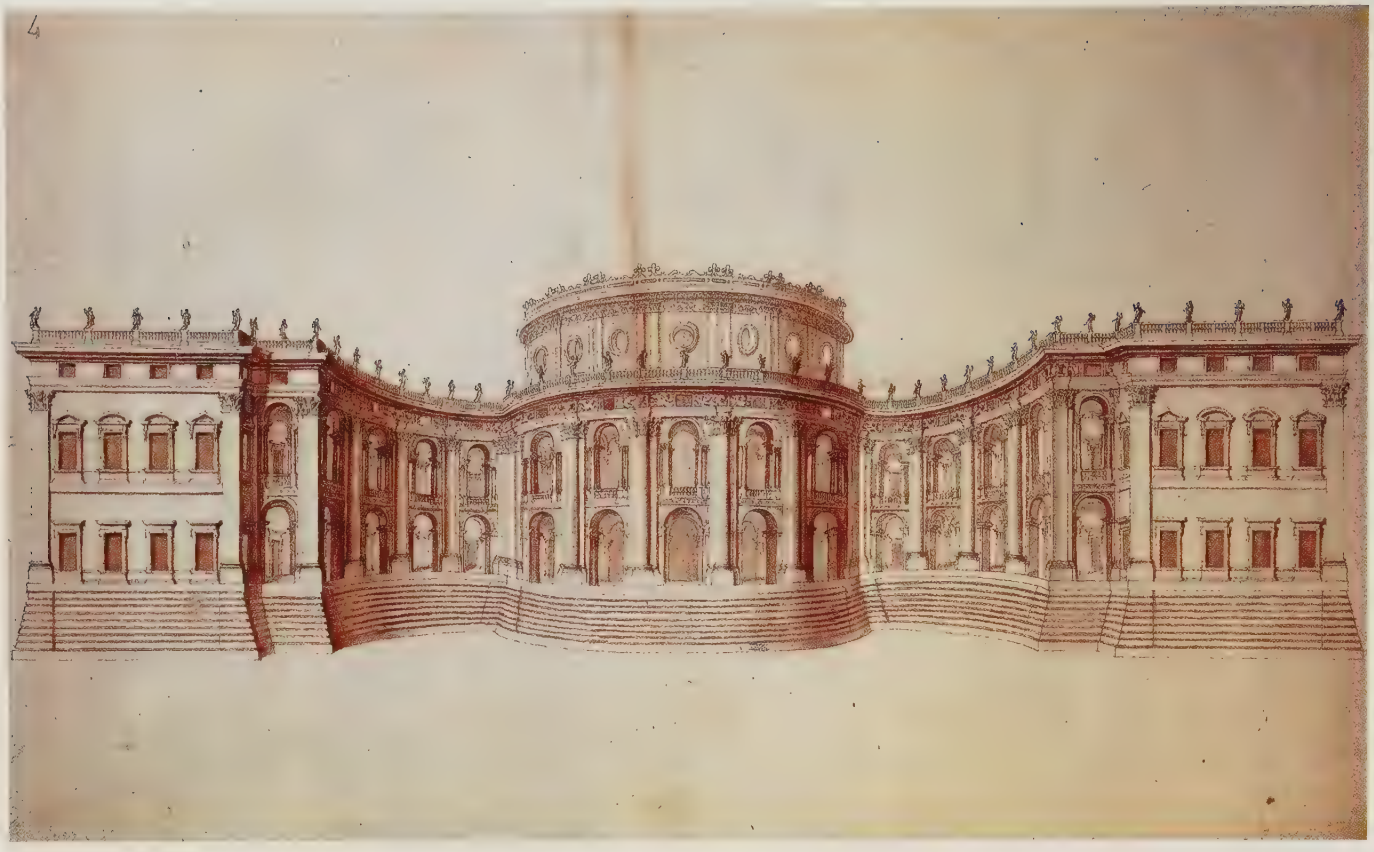
façade for the noviciate of the Jesuits by Martellange, which took its cue from the Gesù in Rome [**4**]. The esthetic preached in the *Parallèle* (the authority of the best ancient examples, a sense of grandeur and of decorum in ornament, the critique of composite orders, in the event, those of Michelangelo and Borromini) seems to foreshadow that of Boileau's *Art poétique*. In point of fact, it is the exact counterpart of that professed at the time by the arbiter of literary elegance, Guez de Balzac, who consigned the literature of Ronsard and his followers to oblivion and promoted the meticulous distinction of the verse of Malherbe and the *sublime* restraint of his own prose.

The real target of the *Intelligents* was though less great Roman rhetoric than late Mannerism. Chambray himself, well after the publication of his *Parallèle*, observes not unkindly Bernini's stay in France, orchestrated with such brilliance by his brother, Paul Fréart de Chantelou. Contemporary polemics called into question not so much the opposition between Roman Baroque and Gallic *classicisme* as an esthetic divergence between partisans of doctrines based on purity of language and the *convenance* (aptness) of ornament and those intent on conserving a free hand in matters of decoration and the use of forms.

Chambray's reproach to the "libertines" of architecture—that is, primarily Michelangelo and his epigones—was that they adulterated the source language—in this sense, the three Greek orders of Doric, Ionic, and Corinthian: "Poor fellows that they are, believing that by treating a particular species of cornice outlandishly, or some other such thing, they have made a new order, and that no more than that is what is called 'invention' . . ."[2] In 1675, François Blondel argued: "Above all, I would not like, in the way of Borromini in Rome, to invert plinths, turn scrolls on their head, or introduce a thousand and one other oddities which besmirch the beauty of the edifices he erected, and which, those aside, would for the most part be of admirable invention and provision; nor would I do as the Architect [Guarini] who begun the church of the Theatines in Paris [Sainte-Anne-la-Royale] and, desirous of following the example of Borromini, chooses what is most extravagant in his practice."[3] In other terms, what Borromini and Guarini were reproached with was being Mannerist, not with being Baroque.

The other terrible fault of such "poor" architects was to neglect *convenance* or suitability. The *grand goût* in the French style snubs neither ostentation nor opulence—provided that they are deployed appropriately. "An abundance of ornaments in a building," Chambray advised, "is not always laudable, nor advantageous . . . One should thus employ them only in great public works, royal residences, and in those palaces built solely for magnificence."[4] Architects had then to always keep in mind the principle of *decus*: there exists a suitable and decent level of ornamentation for each genus of building and for each category of owner. The residence of a merchant made good should not be decorated like the palace of a king. It should be said that the error could often be laid at the door of the patron, and fun was frequently poked at those *bourgeois* who emblazoned the door to their over-elaborate house the word *hôtel*, or who, like La Bruyère's Périandre decorated it with a totally improper Doric: "It's not a door, it is a portico: is it the house of a private individual? is it a temple? people are quite in the dark."[5] Nothing in the

2. *Parallèle...*, p. 3.
3. *Cours d'architecture*, 1675, p. 250 (part 3, book 2, chapter 2).
4. *Parallèle...*, p. 68.
5. *Les Caractères...*, "Des biens de Fortune ," 21, Paris, 1688.

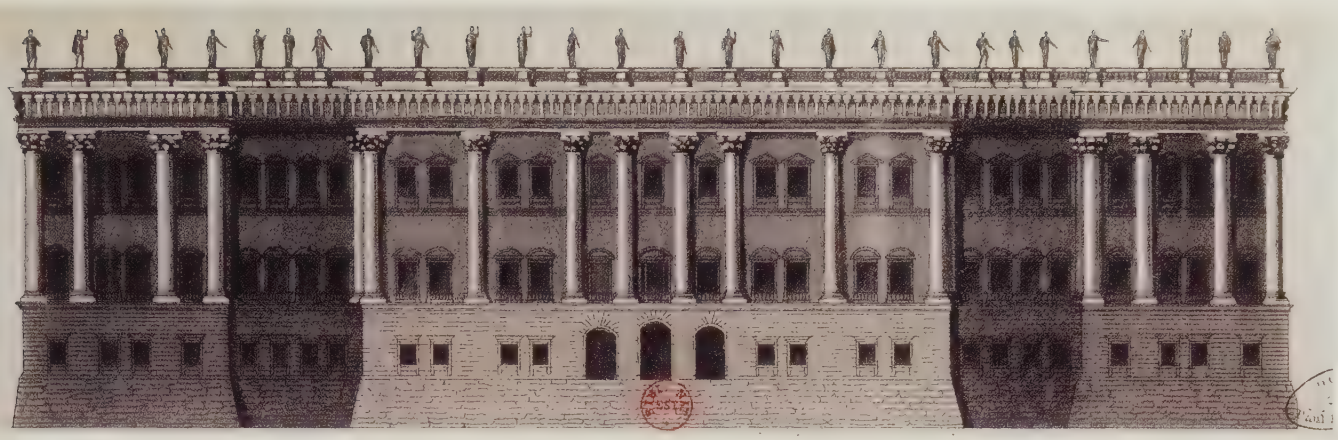


5

work of Bernini, for instance, actually contravenes such principles. Indeed, his architectural vocabulary hardly diverges from Vitruvian norms. Far from being shocking in its "extravagances," his architecture fits in perfectly well with the taste of the *Intelligents* and, in the service of the king of France, his feeling for ostentation could be applied relevantly. His various projects for the Louvre were initially received with enthusiasm by the king. Their unhappy fate had nothing to do with their Baroque character. The first drawings, with their Baroque interplay of curves, were unfeasible because, executed in Rome, they took no account of the plan or site as it was on the ground **[5]**. As for the final draft, a majestic Roman palazzo attuned to the French taste, it was accepted and even something of its construction was begun, the foundation stone being laid in 1665 **[6]**. But Bernini probably lacked the awareness of the realities of the court of France that would have given him a way of not upsetting his competitors and more especially of gaining a worthwhile ally in Colbert. But, deep down, his project, without derogating from the esthetic principles of the *Intelligents*, and in spite of a handful of concessions to French practice, remained alien to a national taste whose scope extends far beyond the term *classique*.

French specificity

It is difficult to classify such a diverse architectural output, and especially to apply to artistic creations the standards defined by the theorists of the period. It is safe to say, however, that from 1630 onward French architects, with few exceptions, tended to repudiate the abundant and unrestrained esthetics that had held sway under Henry IV



6

and to adopt a more sober language. Similarly in literature, "Read the *Essais*," Michel Jeanneret has written. "The grammar and the vocabulary are tough; you need explanations in a footnote. But read Descartes and the lexicon is reduced, less labile, and the syntax is more stable; you feel on familiar ground. D'Aubigné, halfway between the two centuries, writes in an inventive language, roughshod, occasionally anarchic. Then, from 1630, there comes Corneille, and the era of *moyen français* is replaced by that of modern French. A spectacular reining-in has taken place, and this effort of cleansing, begun in the first decades of the 17th century, then accelerates; after which the rate of change slows down and, from 1650 to our day, it's more or less imperceptible. Never again, in any case, will French experience the fever that afflicted it in the Renaissance."[6] And thus in architecture, the inventive, opulent but disorderly idiom of Philibert de l'Orme yielded ground before the stricter if also more limited vocabulary of Salomon de Brosse.

More generally, from the very first years of the century the "outsides" of residences were gradually simplified, as at the Château de Cheverny near Blois [7], or in Paris with the frontages on place Dauphine. Gradually the orders disappeared. If they still reigned supreme at the Château de Blérancourt by Salomon de Brosse, at Mansart's Maisons, and at Le Vau's Vaux-le-Vicomte, they became less forceful in the châteaux belonging to private individuals during the reign of Louis XIV, as if their use felt like a royal privilege. On the other hand, the principles inherited from medieval and Renaissance practices held firm, in particular the propensity to bring out and oppose the volumes of the various parts of the building (avant-corps, pavilions, wings), which alternated verticality and horizontality in the conception of the main range as in the design of those steep roofs so dear to French eyes. Did not Saint-Simon dub Versailles a château whose roof had burned down?[7] A country where the light is less bright than in Italy called for taller windows. Finally the French claimed supreme competence in the incredibly difficult art of cutting and dressing stone, leading them to revel in bare vaulting, dazzling squinches, and dizzying staircases. The grand Italian style suggested by Bernini, however admired and appreciated it was, could never take root in a nation endowed with such a strong architectural tradition of its own.

5.
Bernini, first plan for the east front of the Louvre. Département des Arts Graphiques, Musée du Louvre, Paris.
6.
Bernini, definitive project for the main front of the Louvre, after Jean Marot.

6. *Perpetuum mobile. Métamorphoses des corps et des œuvres de Vinci à Montaigne*, Paris: Macula [1997], p. 199.
7. *Mémoires...*, IV. 54.

7.
Château de Cheverny.

To these properly architectural considerations one can add the political situation: imposing her law on all Europe, France moreover asserted her primacy in the field of the arts and claimed direct descent from the Ancients. With this intention, her architecture embraced the Italian inheritance, but she entertained the notion that she exceeded it in purity, making it therefore more beautiful and also more complete. Bernini failed (but how could he?) to take account of one specificity in the art of building *à la française* that had developed considerably during the 17th century: the sense of *utilitas* in distribution and *convenance* in a residence. As Jacques-François Blondel explained in the 18th century, the Egyptians had invented the techniques of construction—*soliditas*—and the Greeks and the Romans the decorative repertory—*venustas*; it remained for the French to declare themselves the masters of "utility," by improving the art of the disposition of spaces and volumes, so as to build dwellings more perfectly adapted to the needs of the inhabitants.[8]

Two significant texts appeared in 1623 and 1624. The *Manière de bien bastir pour toutes sortes de personnes* by Pierre Le Muet is a collection of models for city residences adapted to various pockets and shapes of plot. In *L'Architecture françoise des bastimens particuliers*, Louis Savot provided advice concerning construction to aristocratic and *grand bourgeois* clients as eager to erect *hôtels* in the new quarters of the city as domains "in the fields." Bernini had little regard for practical considerations, especially as he was faced with the task of building a palace for the king of France and he was exasperated by the perpetual carping of Colbert, forever fretting about the arrangement and orientation of the royal and princely apartments, about the siting of the kitchens, and waste disposal: this was probably the main reason for Bernini's failure.

There was unquestionably a French architecture with typical features, in terms of both style and design, visible in both prestigious projects—urban developments, royal buildings, and great churches—and private residences—*hôtels* in the city and châteaux in the country. As a political tool that could add luster to the state, as the century wore on this national art was increasingly taken under royal authority, with the intention of controlling it by means of the academies and the teaching they dispensed. The profession of the architect was reorganized under monarchical aegis: Colbert created the Academy of Architecture (1671), initially a training school. Its director, François Blondel, published a *Cours d'architecture* (1675) which, with that of Augustin-Charles d'Aviler (1691), appeared to formulate the official taste. The doctrines of the Academy tended to glorify the French manner, as heir to antiquity, taking over where a decadent Italy, now prey to the most reprehensible "liberties," had left off. Admittedly, artists lost a proportion of their independence; but on the other hand, the most eminent acquired an enviable social status. Jacques Lemercier had his portrait painted by Philippe de Champaigne, in a pose and garb comparable to those of a magistrate or even a minister. François Mansart made his fortune, and his nephew Jules Hardouin-Mansart became a familiar at court.

The focus of this development in French architecture was Paris, and it was the capital that set the tone for the entire kingdom. The reinforcement of the role of the state and the prolonged sojourns of the sovereigns in the city until Louis XIV moved to Versailles bestowed new significance on the capital; strong demand from private

8. *Architecture française...*, I, 3, Paris, 1752.

individuals enlarged the built-up area, with the old city walls engulfed by new plots that also expanded into patrician estates sold off by their heirs. The new districts extended north from the Louvre, around the Palais Cardinal, and eastwards with the creation of the *quartier* of the Marais and the parceling out of the Île Saint-Louis; on the left bank, the regeneration of university land and the development of Marguerite de Navarre's vast gardens promoted the expansion of the Faubourg Saint-Germain. Lords and the wealthy middle classes built in these new districts, desirous both of increased comfort and convenience. Religious peace fostered the construction of churches, and the regained prestige of the kings brought with it policies destined to spruce up the capital. The principal actors in this Parisian *renovatio urbis* were Salomon de Brosse (c. 1571–1627), at the service of Maria de' Medici, Jacques Lemercier (before 1586–1654), Cardinal Richelieu's favorite architect, François Mansart (1598–1666), Louis Le Vau (1612–70), Pierre Le Muet (1591–1669), and Antoine Lepautre (1621–91).

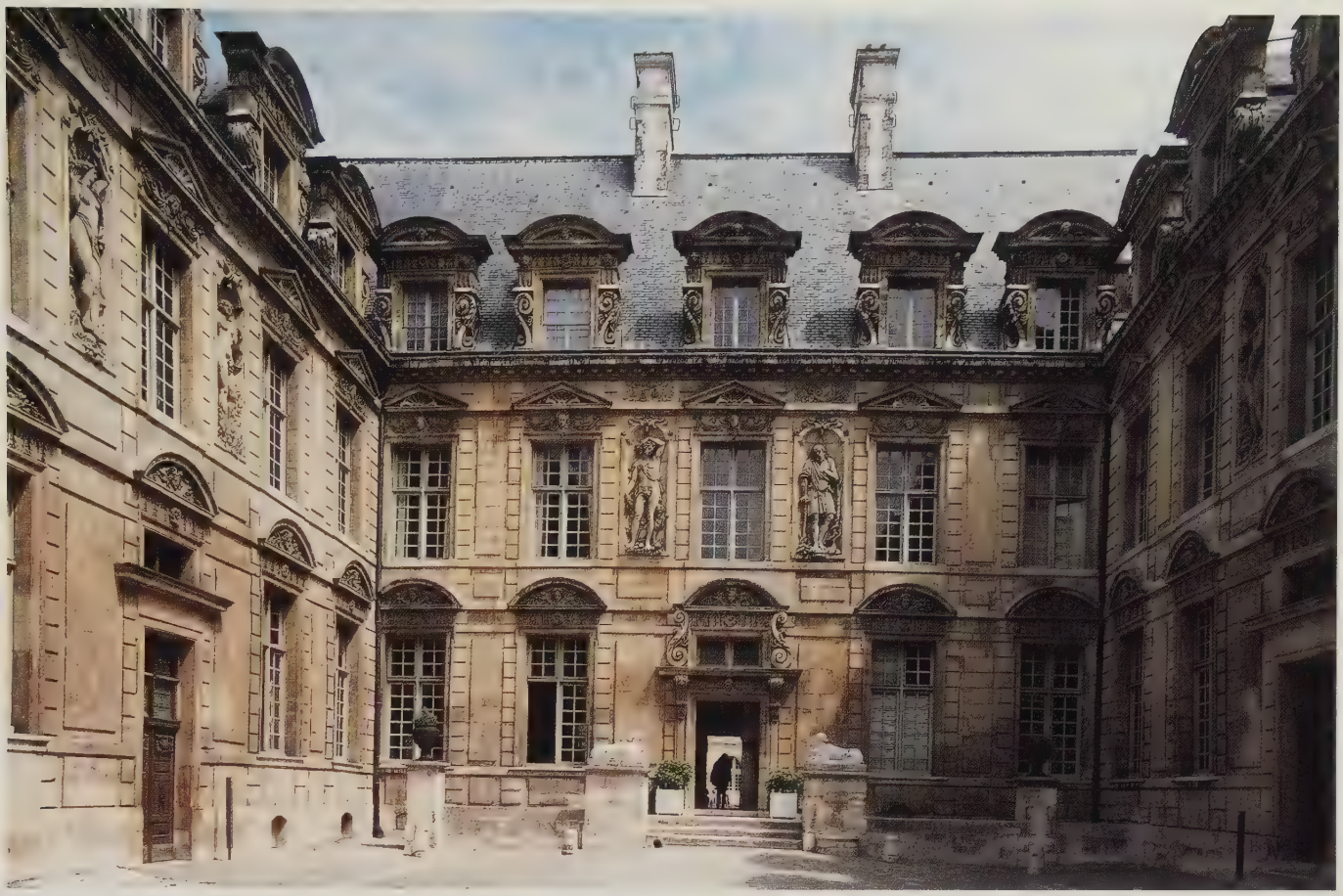
The acme of the French manner

Hôtel de Sully, Paris,
8. plan after Jean Marot.
9. courtyard.

THE TYPOLOGY OF THE *HÔTEL PARTICULIER* (private mansion) is already tangible at the Hôtel de Cluny, a residence built for Jean de Bourbon between 1456 and 1485: the dwelling consists of one building between courtyard and garden, perfectly integrated into the urban environment with a simple enclosing wall to the street. This typically French approach will become the most frequent, even if some *hôtels*, for diverse reasons, present their main range to the street. In the Renaissance, models were provided by the Hôtel de Grand Ferrare, built at Fontainebleau by Serlio (no longer extant), and especially the Hôtel Carnavalet by Pierre Lescot, enlarged by Mansart in the 17th century. The latter was characterized by its staircase, relegated to the side wing so as to release an enfilade of rooms in the main building at the back of the courtyard, and by the presence to one side of a stable yard separated from the main court by a simple wall that was perhaps given illusory elevation.

Certain *hôtels* built at the beginning of the 17th century remain relatively simple in design and close to models from the previous century: this is the case with the Hôtel de Sully built in 1625 for the Comptroller of Finances, Mesme Gallet **[8]**. To the street, two ranges for domestic service and the stables frame an entryway leading to a rectangular court; in the *corps de logis*, consisting in rooms in enfilade open to both court and garden, the main entrance allows access to the dogleg staircase, following a formula inherited from the 16th century. The staircase, which bisects the edifice, is shifted slightly to the right, however, so as to vouchsafe greater volume to the rooms located on the left (a feature that recalls an idea employed by Jean Bullant at the Château d'Écouen). This shift—rather unsatisfactory insofar as the first flight does not address the entrance—is useful in disengaging the route to the garden. The decoration of the façades tends to the sober, even if the recourse to sculpture, in particular on the principal story, evokes the precedent of the Hôtel Carnavalet **[9]**.

In mansions from the beginning of the century, the main body of the house remains uncomplicated, with light coming in from two sides. In larger dwellings, the main story repeats the distribution of the ground floor with a *salle* and an "apartment" for the master and mistress of the house. This term, of Italian origin, appeared in the *Regrets* of Joachim Du Bellay (sonnet 157), indicating a suite of rooms necessary for a complete habitation, that is to say, at the very least an anteroom, a bedroom, a cabinet, and a garderobe—a collection of chambers reserved in the previous century for kings and



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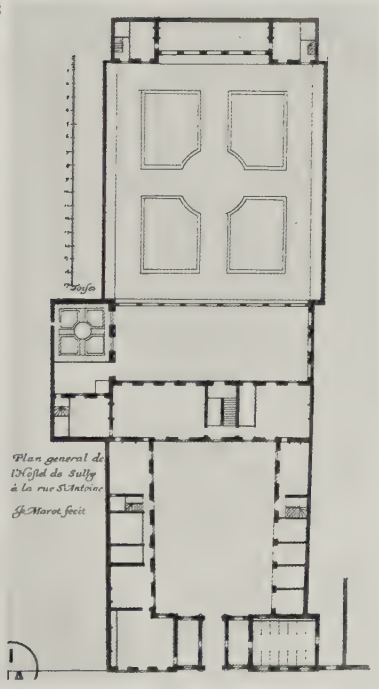

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princes. Thereafter other rooms started appearing, such as the gallery (long room), borrowed from the châteaux, and the *salon*, a new reception area that replaced the traditional "hall." The Hôtel de Rambouillet (1620; destroyed) ushered in some more modern elements: a staircase thrown to one side and a room with an alcove, the first of its kind in Paris, where the marquise received her literati coterie, the Précieux. In later years, city residences became more complex. From 1630, an off-center plan, generally with just one wing, became widespread. The Hôtel Chalon-Luxembourg (1623–25) was the first of a new type, the *corps de logis dédoublé*, consisting in two conjoined but separately roofed parallel buildings, but the advantages of this arrangement were hardly satisfactorily exploited, because there was only one door communicating between the two suites of rooms. Elsewhere, the shift from single main block to double-pile considerably increased habitable space by making the provision of rooms less rigid, all the more so since the uptake of the gable roof allowed larger spans and thus wider ranges: Le Vau exploited this to the full at the Hôtel Tambonneau (1642–46; destroyed).

Constructions of the reign of Louis XIII are characterized by a new balance between forms and volumes, with an interplay between light and shade, spaces and masses. Gardens, up until then extremely rare in the heart of the city, began to be laid out in the larger residences. Simple *parterres de broderie* (Hôtel Guénégaud des Brosses) in line with the building made way little by little for parterres framed by hedges and bowers (Hôtel de La Vrillière), and were structured around fountains or pools (Hôtel de Rambouillet). The problems of distribution, made more acute by the demand for improved levels of comfort, allow the finest architects to display their ingenuity in

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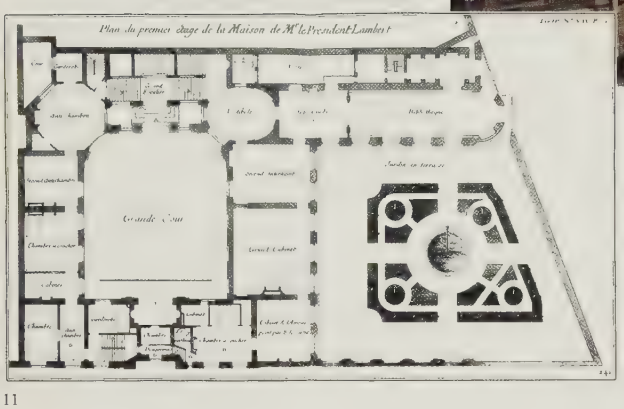

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mitigating the small size and irregularity of a given plot: this was the case with Salomon de Brosse at the Hôtel de Bouillon (reworked by Jacques Lemercier to become the Hôtel Liancourt), François Mansart at the Hôtel de Jars and the Hôtel de La Vrillière (now the Banque de France), and Louis Le Vau at the Hôtel de Bretonvilliers (no longer extant) and the Hôtel de Lambert, both located on the recently parceled out Île Saint-Louis. Each of these buildings offered one or more novel solutions to the disposition of the room, courtyards, and gardens in the most rational and convenient manner possible. The *hôtel* designed by Le Vau for Jean-Baptiste Lambert from 1641 presents several original features **[10]**. The terrain, located at the tip of the Ile Saint-Louis was necessarily shallow, so Le Vau had the idea of setting the garden to one side of the residential block, placing two superposed galleries in a building perpendicular to the principal axis, placed above a ground floor reserved for services (the stables). Hence, the first gallery, fitted with the newly invented "French windows," opens on to the ground floor; that on the upper level boasts a fashionable ironwork balcony, also of recent vintage **[11]**. Forming a half-moon, these galleries benefit both from convenient access and pleasant views, over the Seine as well as the garden. The Hôtel Lambert plays in addition a significant role in the history of interior decoration, because it is here that appeared the vaulted ceilings and painted decors characteristic of "Italian-style" rooms, fruitfully exploited by Le Vau at the châteaux of Vaux-le-Vicomte and Versailles. It was decorated by the foremost artists, Charles Le Brun (Galerie d'Hercule) and Eustache Le Sueur (Cabinet des Bains). The Hôtel de Jars (destroyed), built on the rue de Richelieu by François Mansart from 1648 on, kept to standard schemas, but, located on a narrow rectangular piece of land, its design was innovative **[12]**. It enjoyed a reputation as one of most comfortable residences in the capital. The doubling of the main pile between court and garden and a single gable

roof provided a maximum rationalization of the space, as at Le Vau's Hôtel Tambonneau. Above all, its asymmetrical plan with a duplicated single wing and with space for two secondary courtyards considerably enlarged the surface area by increasing the number of rooms touched by daylight; this wing was moreover of sufficient size to allow for a gallery on the floor above. The *cour d'honneur* thus lay off-kilter with respect to the plot and to the garden front which extended over the entire breadth of the terrain. The suspended staircase rising to one side made space for a vestibule that facilitated the distribution of the main body of the house, which thus combined greater accessibility with apparent symmetry on each side. Moreover, thanks to a lateral surrounding wall that rose only to the height of the ground floor, the gallery boasted superb views over the Montmartre scenery **[13** and **14]**. The case of the Hôtel de

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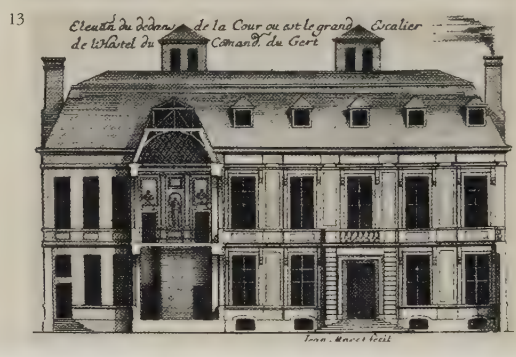

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Beauvais (today on rue François-Miron), built by Antoine Lepautre between 1652 and 1655 for Catherine Bellier, the queen's chambermaid, is rather different, although it required no less ingenuity on the part of the architect **[15]**. The edifice presents one of the finest achievements of regular composition on irregular terrain. Exceptionally, the principal residential building looks onto the street, the ground floor being occupied by shops **[16]**. The architect did the best he could with the land, a fusion of two plots giving on to two different thoroughfares, by piercing a secondary entrance on the second street. Moreover, construction was constrained by the foundations of earlier structures. The apartments occupy the first floor and are placed above the entrance corridor, the shops on the ground floor being surmounted by a mezzanine. Once through this corridor, visitors arrive at a porch like a Doric rotunda that leads to the staircase and a grand hemicycle courtyard in the same axis. The monumental staircase leads to the upper story, where a central vestibule giving on the court serves on one side the reception rooms on the street side and on the other private apartments grouped along the right-hand side of the triangle **[17]**. In this part Lepautre placed a gallery and—with great originality—a small hanging garden above the stables and the long

10.
Louis Le Vau,
Hôtel Lambert, Paris,
courtyard.
11.
Louis Le Vau,
Hôtel Lambert, Paris,
plan after Jean Marot.
12.
François Mansart,
Hôtel de Jars, Paris,
plan after Jean Marot.
13.
François Mansart,
Hôtel de Jars, Paris,
garden, after Jean Marot.
14.
François Mansart,
Hôtel de Jars, Paris,
courtyard front,
after Jean Marot.

Antoine Lepautre,
hôtel de Beauvais, Paris,
15. façade after Jean Marot.
16. plan of the ground floor,
(Jacques François Blondel,
Architecture françoise…,
t. II, Paris, 1756).
17. plan of the first floor
(Jacques-François Blondel,
Architecture françoise…, vol. 2,
Paris, 1756).

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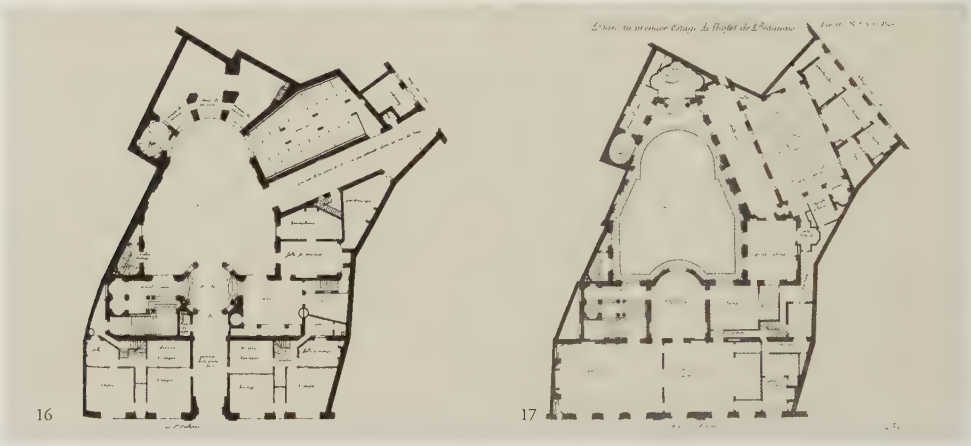

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corridor of the secondary entrance. At the end of the gallery, above the hemicycle, stands the chapel. All the secondary areas created by the irregularity of the plan were utility spaces of various types. The ground plan and arrangement of the buildings were unusual and highly ingenious.

The evolution of *châteaux*, parallel to that of Parisian *hôtels*, differed in some respects. At the Palais du Luxembourg in Paris (from 1615) and at the Château de Richelieu **[18]** in Poitou (from 1631), Salomon de Brosse and Jacques Lemercier followed a traditional layout characterized by a principal *corps de logis* and wings framing a court on the side of the entrance enclosed by a lower wing. The function of the urban palace of the Luxembourg as a residence of the queen mother and the young king called for a symmetrical distribution of the rooms as much in the main block, distinguished by the doubling of the pavilions to the sides, as in the wings, where two galleries face each other **[19]**; both should have been decorated by Rubens, with to one side the cycle of the life of Maria de' Medici (today in the Louvre) and to the other a cycle devoted to the life of Henry IV, which remained on the drawing board. The château is dressed in Florentine rustication into which the superposed orders flow **[20]**. The decoration was intended to remind the queen of the Palazzo Pitti in Florence, where she had spent

18

18.
Jacques Lemercier,
Château de Richelieu.
Engraving by Perelle,
17th century. Châteaux de
Versailles and Trianon, Versailles.
19.
Salomon de Brosse,
Palais du Luxembourg,
Paris, plan of the ground floor
after Jean Marot.
20.
Salomon de Brosse,
Palais du Luxembourg, Paris,
façade to the garden.

her childhood. In a further stroke of originality, the entrance pavilion was capped with a dome, a rare choice in civil architecture, borrowed from the plans for the Château de Verneuil possibly drawn by Jacques Androuet du Cerceau and on whose site Salomon de Brosse had worked at the beginning of his career. The traditional plan organized around a court was again adopted by François Mansart for the Château de Blois (1635 onward), a prestigious order by Gaston d'Orléans, the younger brother of Louis XIII. Only the wing at the rear was built, but the architect envisaged razing constructions of Louis XII and Francis I to build in the same style two wings to the sides, with a vast oval hall on the right, and a wing closing it off in the center of which would have stood a majestic pavilion topped with another dome, as at the Luxembourg **[21]**.

The evolution was notable in other buildings of the period: the side wings of the châteaux disappear at Blérancourt (1612) **[22]**, Balleroy (from 1631 on) **[23]**, and

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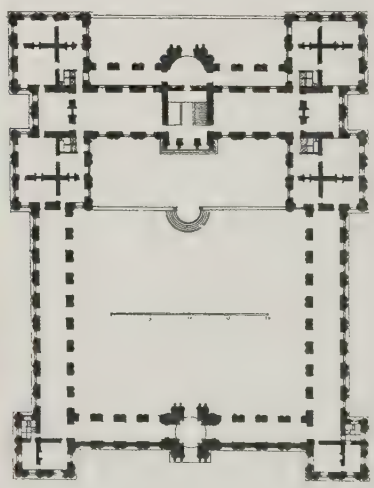

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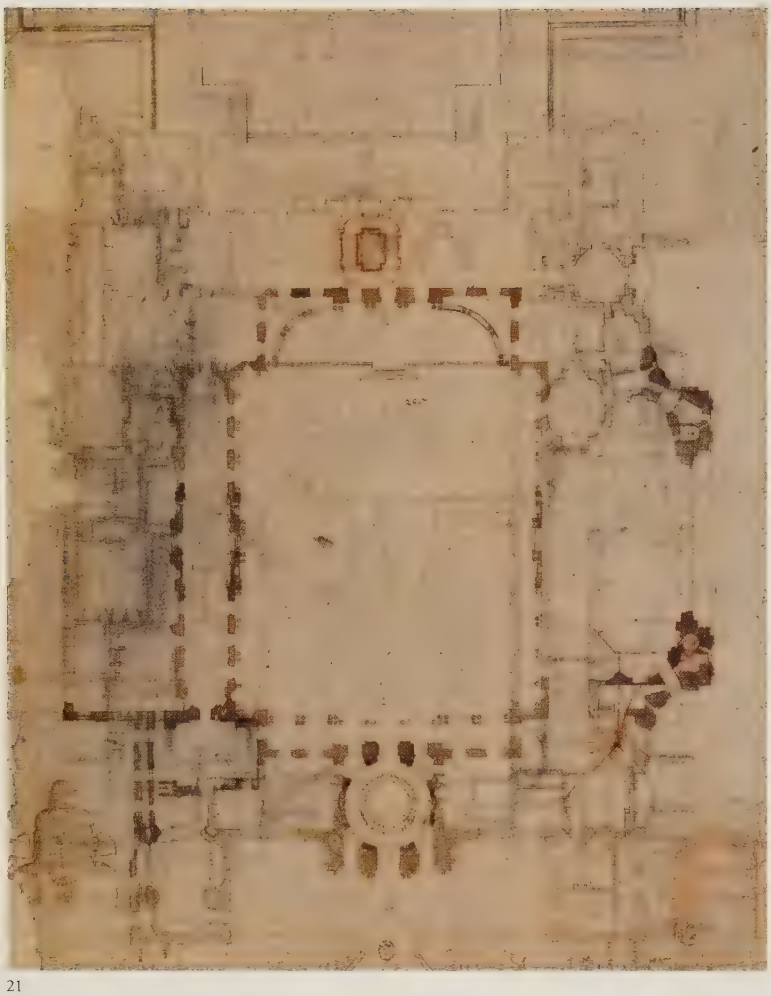

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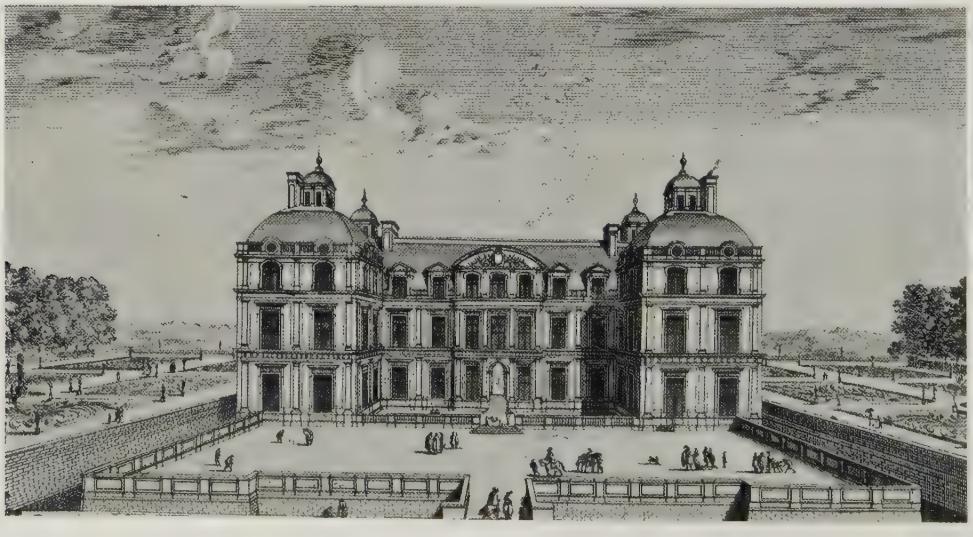
Saint-Loup-sur-Thouet (1609–26) in Poitou. Two small isolated pavilions initially subsist at the corners (Blérancourt). The usual gallery shrinks and is gradually jettisoned altogether. Henceforth a modern château possessed a massive plan, preceded by a court and enclosed by a wall and a gateway, vestiges of the earlier *corps*. The whole is erected on terracing, sometimes bordered by a ditch or possibly a moat, following the example of a medieval fortress. Beaumesnil, in Normandy (1633–40), is a first-rate example **[24]**; but the masterpieces of the kind are the châteaux of Maisons (today Maisons-Laffitte), built by François Mansart, and Vaux-le-Vicomte by Louis Le Vau. Maisons, built between 1642 and 1646 for the extremely wealthy *président* René de Longueil, consists of a main range at the rear of a dry trenched platform graced by one central and two side pavilions; the two small right-angle returns on the ground floor, court side, are redolent of the side wings in an old residence, replaced by terraces **[25]**. Mansart introduced the innovation of placing a vestibule in the center pavilion that served as a transition between courtyard and garden, and by situating the majestic staircase in a well shifted to the right. Such a solution, inspired by *hôtels particuliers*, offered the dual advantage of releasing volume on the floor above for the hall, and, on the ground floor, of giving a view over the garden through the vestibule, which was originally only shut off by iron grilles **[26]**. The park was planted with magnificent parterres, the château being designed to benefit from views over the Seine and to Saint-Germain beyond. In addition, the amount of volume allotted to the staircase meant that the architect could indulge in one of those spectacular quarter-turn staircases **[27]** masterpiece of stone-carving whose virtuosity is emphasized by the



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23

24

vaulting being left exposed—which at this time were ousting the doglegs in vogue since the Renaissance, the Hôtel de Sully being one of the last examples. Mansart erected several of these splendid staircases, witness the enormous examples in the Château de Balleroy and Hôtel Guénégaud des Brosses (1651–52) in Paris **[28]**. But, in spite of such compositions, the rooms in Maisons remained laid out in enfilade, which hardly made circulation convenient.

The exterior of Maisons is sumptuous: the orders are superposed with lavishness and handled with brilliant variety, while the effects of rhythm and relief are striking. This decorative richness resurfaces in the hall that Mansart endowed with a very original Doric order **[29]**. For the cornice, he took inspiration from a plate by Philibert De l'Orme which reworks, unacknowledged, the entablature of the third order in the Palazzo Farnese in Rome designed by Michelangelo. In some ways, such abundance and freedom in ornamentation may appear odd, since they have little connection with the social status of the owner, who was not a prince of the blood; the château at Blois Mansart designed for the king's brother, Gaston d'Orléans, is not so elaborate **[30]**. The stables the architect built in Maisons, adorned with a very precise Doric order, are just as luxurious—and just as improper.

An important phase was entered into with the Château de Vaux-le-Vicomte, built between 1657 and 1660 by Louis Le Vau for the ostentatious and ill-fated Surintendant des Finances (finance minister), Nicolas Fouquet **[34]**. The centrally planned edifice rises on a terreplein girded by ditches filled with water closed off to the court side by a grille. But the principal innovation lay in the plan **[32]**: the *corps de logis*, divided into two as in a Paris *hôtel*, ensures a great flexibility in distribution; moreover, a central axis, comprising, *côté cour*, a vestibule, and, *côté jardin*, a great Italian-style *salone* with a domed ceiling over two levels **[33]**. The reception rooms were, for the first time, located on the ground floor—making this the *piano nobile*—so that the now useless traditional monumental staircase was replaced by two small dogleg stairs almost hidden to either side of the vestibule. Although logical, this solution was exceptional: the dressed-stone suspended staircase remained a sign of prestige to which French architects and patrons alike remained faithful. The ground floor, placed on a plinth, is slightly raised so as to light the basements sheltering the utilities and kitchens and thus facilitate service. The handling of the outside is no less original. The elevation is relatively complex to the court front because the corner pavilions were duplicated, each with

21.
François Mansart,
plan for the reconstruction
of the château at Blois.
Département des Estampes et
Photographies, Bibliothèque
Nationale de France, Paris.
22.
Salomon de Brosse,
Château de Blérancourt.
Engraving by Israël Silvestre.
Musée National de la
Coopération Franco-Américaine,
Blérancourt.
23.
François Mansart,
Château de Balleroy.
24.
Château de Beaumesnil.

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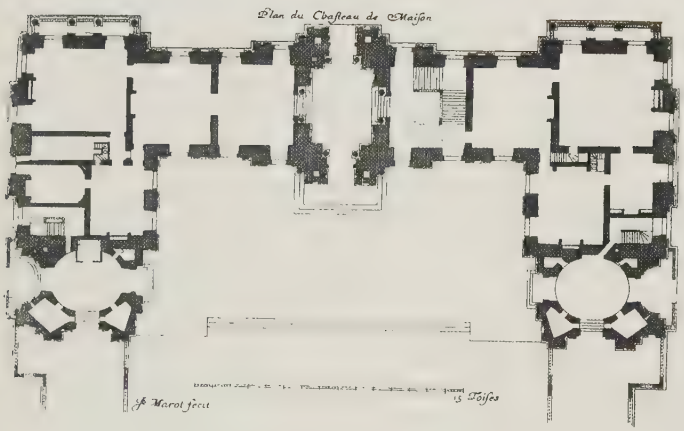

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25.
François Mansart,
Château de Maisons,
garden front.
26.
François Mansart,
Château de Maisons,
plan of the ground floor
after Jean Marot.

27.
François Mansart,
Château de Maisons, stairway.
28.
François Mansart,
Hôtel Guénégaud des Brosses,
Paris, stairway.

30

a roof of its own **[31]**. On the garden side, the main block presents a traditional articulation in five parts, but the central pavilion of oval form projects with respect to the other elements of the front: this arrangement that Le Vau had already tried out in 1645 at the Château de Raincy (destroyed) introduces curved forms into the design of the façade that create a strong contrast with the rectangular pavilions, reinforced by variations in roofing (central dome, sloping roofs for the pavilions) and by the treatment of the orders (Colossal Ionic pilasters for the corner pavilions, superposed orders for the avant-corps in the center).

Following Fouquet's arrest, Louis Le Vau, André Le Nôtre, and Charles Le Brun, who had decorated the interior, passed into the service of Louis XIV and concentrated on the gestation of Versailles. But Vaux should not be considered as merely a blueprint for the great royal palace. Fouquet's domain in fact constituted the culmination of an evolution and provided a model for the large-scale French château for the second half of the 17th century and the 18th. The double *corps de logis*, articulated around a *salon* projecting into the garden, was reused at Champs-sur-Marne (1703–07), and even, beneath a Neoclassical veneer, as late as 1780 by Claude Joseph Bertrand at Moncley, close to Besançon. Simply, the plans became more complex, as with the *hôtels*. One final

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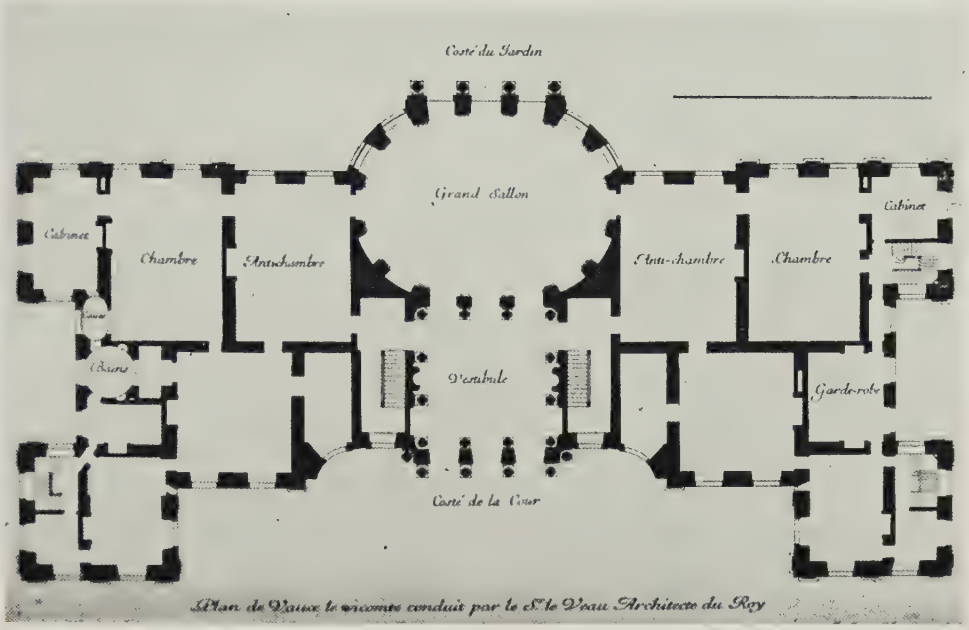
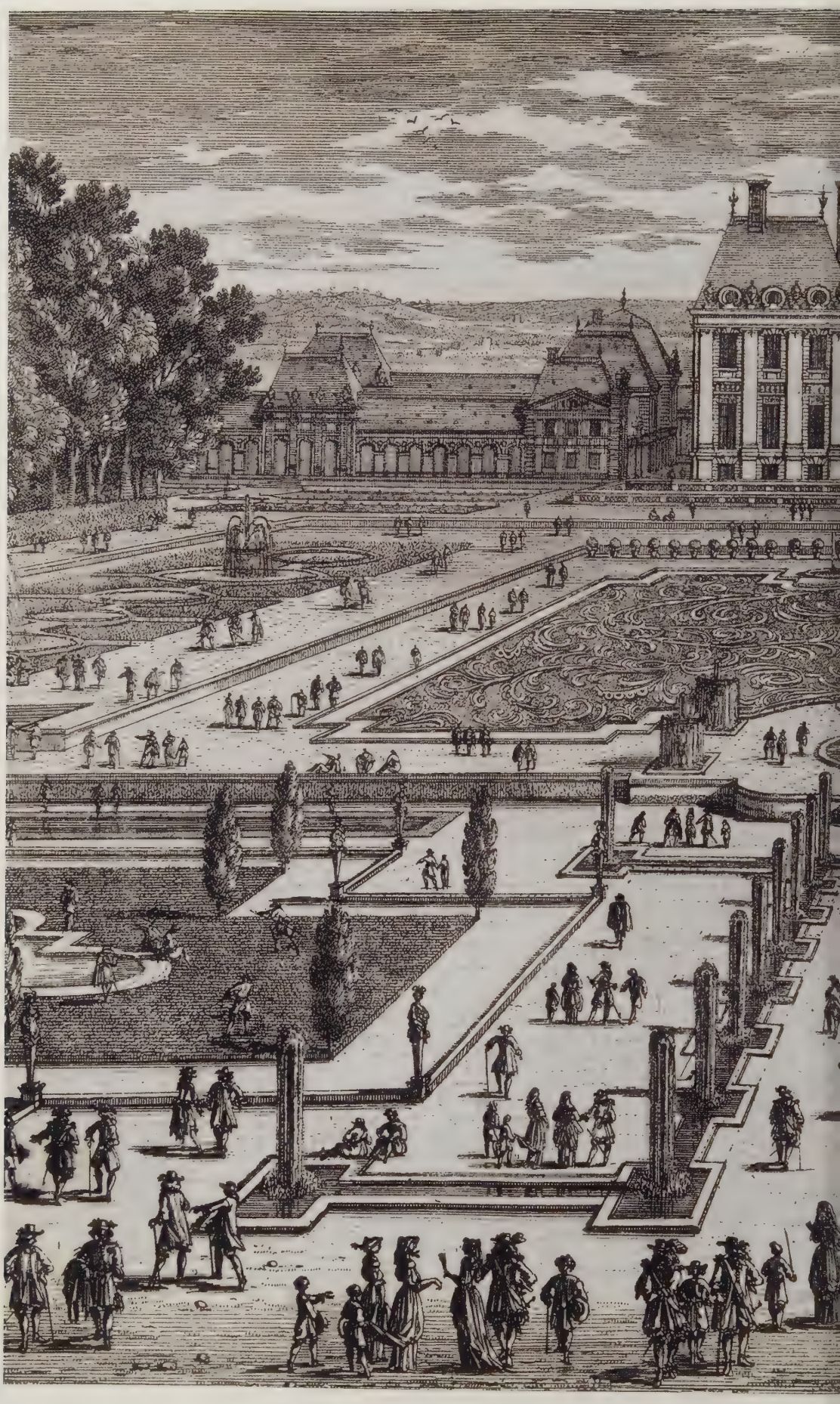


29.
François Mansart,
Château de Maisons, hallway.
30.
François Mansart,
Château de Blois,
Gaston d'Orléans wing.
31.
Louis Le Vau,
Château de Vaux-le-Vicomte,
main hall.
32.
Louis Le Vau,
Château de Vaux-le-Vicomte,
courtyard front.
33.
Louis Le Vau,
Château de Vaux-le-Vicomte,
plan of the ground floor.

characteristic of Vaux, and not the least, was the importance allotted to the garden laid out by Le Nôtre (the present-day one—created in the 19th century at the time of the restoration of the château by Alfred Sommier—offers little more than an inkling). Le Nôtre cannot be said to be the inventor of the *jardin à la française*: Jacques Boyceau de La Barauderie had made the first steps at the Luxembourg in 1615, and Claude I Mollet had already planted out large-sized parterres de broderie for Henry IV at Fontainebleau. Several treatises had been written, including *Théâtre des plans et jardinages* by Claude I Mollet, the father of André, with a dedication to Fouquet (Paris, 1652). But Le Nôtre created its most spectacular manifestation, and, more crucially, engineered the extraordinary fusion between the architecture and the beds and thickets surrounding the château. The most telling consequence of this closeness between building and garden was that the principal story became the ground floor. The avenues could thus be enjoyed immediately though the French windows of the great hall which, since it is set forward, affords views over the parterres planted to the sides.

The garden at Vaux was the first elaborate example of a garden on a plain, very different from Italian gardens, which were often laid out on sloping sites. Two essential factors determined its composition: the longitudinal axis, which structures the space out to the



34.
Louis Le Vau,
Château de Vaux-Le-Vicomte.
Engraving by Perelle,
17th century. Châteaux
de Versailles and Trianon,
Versailles.

35.
Church of Val-de-Grâce,
Paris, façade.

infinite horizon, and the importance ascribed to water—not running water, as in Italy, but the calm water of the basins and canals. The vegetation, less varied, was limited to a few species, yew and boxwood, harmoniously arranged and geometrically pruned. Nature was organized into a coherent landscape to be viewed from the château. Another stroke of genius by Le Nôtre was achieving the perfect synthesis of the vegetation (lawns, plants, and trees), the water features (represented here by the canalization of the Anqueuil and the fountains, *jets d'eau* and cascades arranged in the various basins), and the artificial elements (grottos and sculptures). The garden thus becomes a total work of art, where nature and artifice combined to compose a stage intended as much to afford pleasure and delight to the occupants as to aggrandize the dwelling itself. This polished nature was that of La Fontaine's *Fables*: the poet—in fact a protégé of Fouquet's—knew and adored these gardens. To defend the unfortunate superintendent, he even imagined letting the nymphs of Vaux, whom Le Nôtre had lodged so sumptuously, speak on his behalf.

But parks and poetry can be places of surprise, of the incongruous, of the absurd even. On leaving the château, a visitor might believe he can reach the horizon closing off the perspective relatively quickly—like a reader thinking of jumping to the moral of the Fable. Le Nôtre and La Fontaine, however, are not so straightforward; the reader of the *Pouvoir des Fables* passes from narrative to narrative, and ends up losing sight of the ostensible logic of the story, just as the walker realizes that the prospect opening up to his right is not the same as the one his spies to his left, that the appearance of the château changes progressively as he walks on. Finally, at the end of the main *allée*, he is surprised to discover the until then invisible river, the Anqueuil, with caves barring his path and obliging him to make a lengthy detour. But it does not matter: neither the vanishing point of the perspective nor the moral of the tale are ends in themselves. The essential thing is to walk through the garden—or through the story. One has to read the masterpieces of French classicism carefully, since they are all too easily opposed to the demonstrations of a Baroque that one has great difficulty in defining—or else to a "sentiment for Nature" which, in the 18th century, inspired the English garden: and Nature there, apparently so untamed, is no less composed, more artificial even in its superficial spontaneity.

Religious architecture

In the 17th century, the relative denominational calm instigated by the Edict of Nantes (1598), the setting up of new religious orders, and the demands flowing from the Counter-Reformation provided a fillip to ecclesiastical construction. For façades, the Roman model of the Gesù—superposed orders and narrower upper reaches—prevailed. The Jesuit father Étienne Martellange kept to it in large measure in 1630 for the little church of the noviciate of the Jesuits in Paris (since destroyed). François Mansart adapted it rather more freely at the church of the convent of the Feuillants (1623, destroyed), where he employed addorsed twin pillars which set out the planes clearly—a formal system that reappears in the majority of French façades [**36** and **35**]. To attain the required height in completing Gothic churches, architects had no hesitation in adding a third level over the front. Salomon de Brosse thus superposed

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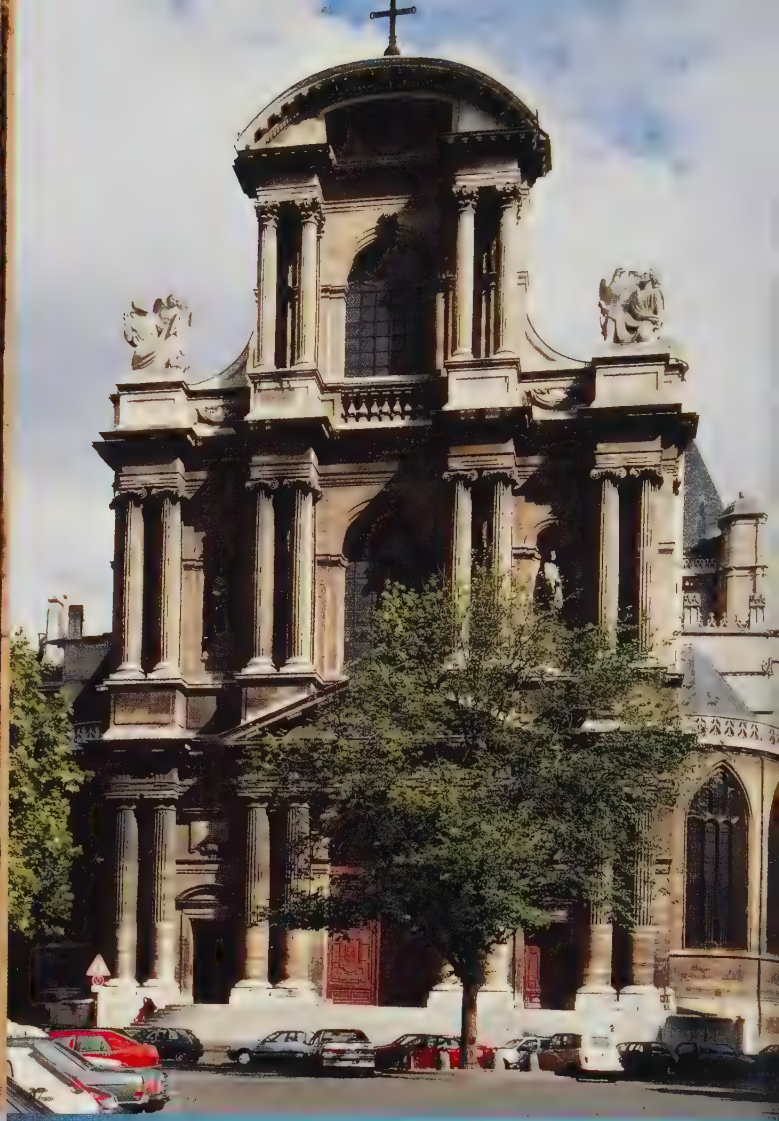
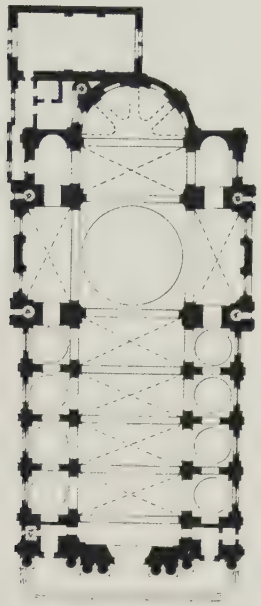
Les Feuillans (Ci-
devant) rue St
Honoré Paris.
Mr Manlart Inv.





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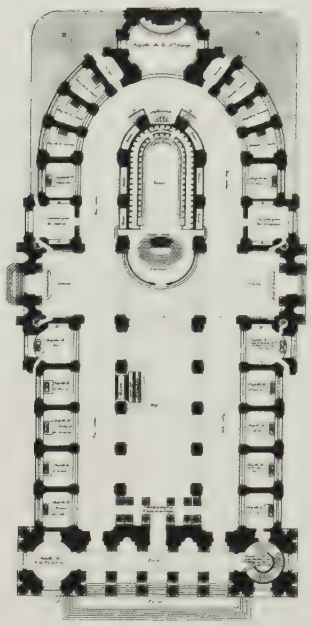

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three orders of vigorous columns on the front of Saint-Gervais-Saint-Protais in Paris (1616), attaining a unity reminiscent of the forepart of the main wing of the Château d'Anet **[37]**. Such slender façades also adorned newly built churches, because the French continued to build their naves high; this was the case with the church of the Maison Professe of the Jesuits, today Saint-Paul-Saint-Louis (1627–41), begun by Father Martellange, who provided the plan, the three-level façade being designed by another Jesuit, François Derand, from 1634 **[3]**.

Other, newer solutions began appearing. For the Chapelle de la Sorbonne **[38]**, Jacques Lemercier designed a classical façade, facing the square, with two levels of unequal width, richer but comparable in principle to the one he had designed for the church of Notre-Dame de Richelieu **[39]**. But for the entrance to the transept giving on to the court of the College he chose a colonnade beneath a pediment—a very unusual solution at that time for the façade of a church. Another formula was essayed with the splendid plan for the "doorway" for the convent of the Minimes by François Mansart, started in 1657 but greatly altered and today obliterated. The first two levels, Doric and Corinthian, were animated by many projections, imparting considerable plasticity and acting as a foil to the dome at the summit that terminated the strange pyramidal elevation.

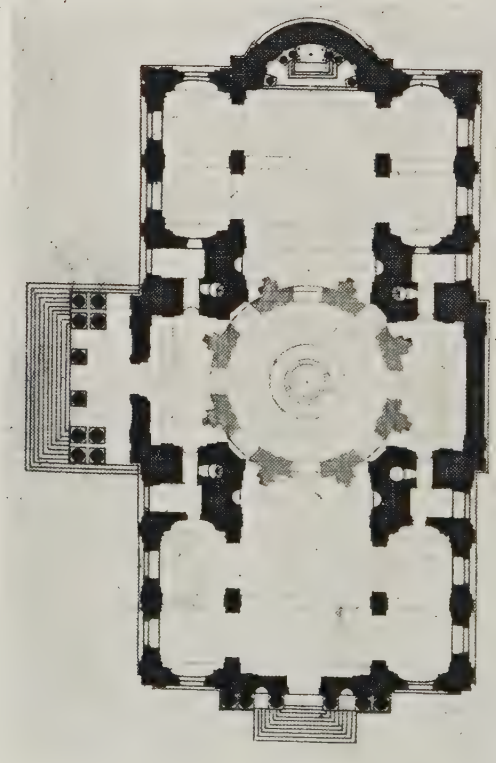
The plan of newly built churches at the beginning of the 17th century placed them in exact descent from Vignola's Gesù. Saint-Paul-Saint-Louis, for example, disposes of a single nave flanked by side chapels **[40]**; the transept is very short and the abbreviated choir terminates in an apse **[42]**: since the functional specifications were much the same, the end product is too. In Paris, the Carmelite friars, the Oratory, and Val-de-Grâce follow this plan. Round the middle of the century, however, a return to the medieval format with aisles and ambulatories can be observed at Saint-Jacques-du-Haut-Pas, at Saint-Louis-en-l'Île, and especially in the two chief achievements of the second half of the century and completed during the next: Saint-Roch and Saint-Sulpice **[41]**. In the majority of these edifices, Roman forms—pilasters, arcades, and tall

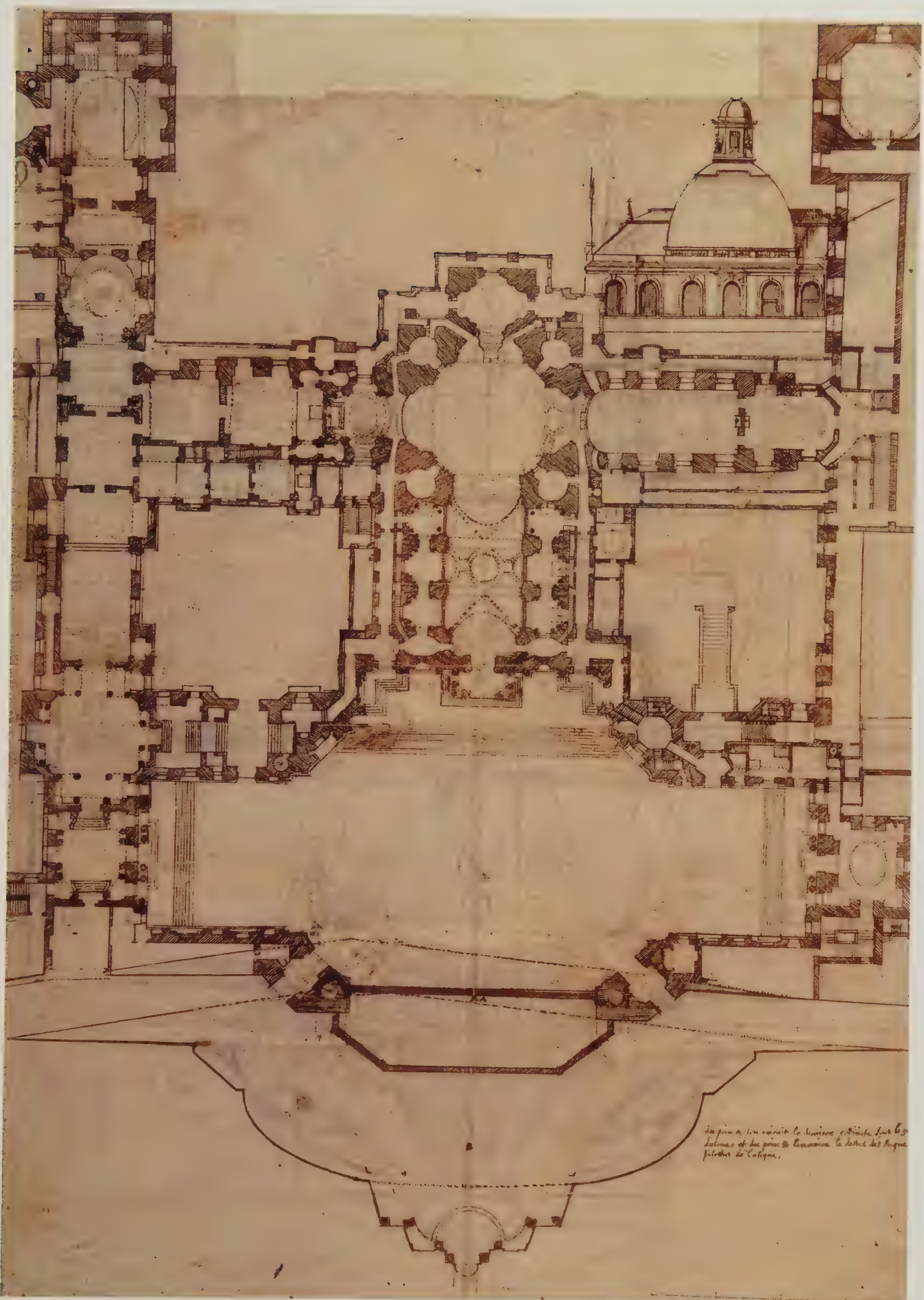
36.
François Mansart,
plan for the church of the Feuillants, Paris. Département des Arts Graphiques, Musée du Louvre, Paris.
37.
Salomon de Brosse,
church of Saint-Gervais-Saint-Protais, Paris, façade.
38.
Jacques Lemercier,
chapel of the Sorbonne, Paris, façade.
39.
Jacques Lemercier,
church of Notre-Dame, Richelieu, façade.
40.
Étienne Martellange,
church of Saint-Paul-Saint-Louis, Paris, plan.
41.
Church of Saint-Sulpice, Paris, plan,
(Jacques-François Blondel, *Architecture françoise…*, vol. 2, Paris, 1756).

42

42.
Church of Saint-Paul-Saint-Louis, Paris, interior.
43.
François Mansart,
church of Val-de-Grâce, Paris, plan project.
Département des Cartes et Plans, Bibliothèque Nationale de France, Paris.
44.
Jacques Lemercier,
chapel of the Sorbonne, Paris, plan after Jean Marot.

44





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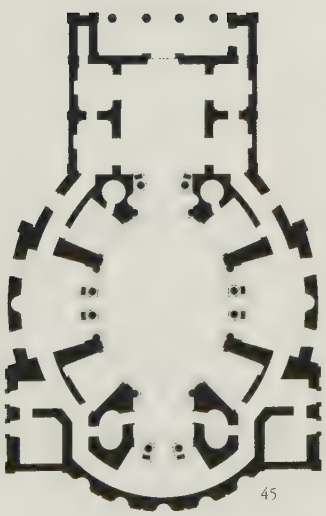
45.
Pierre Puget,
chapel of the Vieille Charité,
Marseilles, plan.
46.
Pierre Puget,
chapel of the Vieille Charité,
Marseilles, view of the apse.
47.
François Mansart,
church of the convent
of the Visitation Sainte-Marie,
Paris, cupola.
48.
François Mansart,
church of the convent of the
Visitation Sainte-Marie, Paris,
plan after Jean Marot.
49.
François Mansart,
church of the convent
of the Visitation Sainte-Marie,
Paris, façade.

windows—are stretched upward, so that the effect is very different from that in Rome: the verticality, buoyancy, and luminosity of the Gothic are as if revisited in what are "classical" churches. The great windows in barrel vaults, in particular, entail lunettes of such dimensions that they tend to meet and transform the barrel into a succession of groined vaults, as at Saint-Paul-Saint-Louis. Contrary to Italian practice, the vaults are seldom painted: architects preferred to leave the stone and its bonding visible, thereby emphasizing their prowess in stereotomy.

The prevalence of the Latin cross model did not prohibit some rather remarkable works of central plan. The choir of Val-de-Grâce (plans by Mansart, started in 1645) forms a triconic placed at the end of the nave **[43]**. More spectacular, the church of the Visitation, by the same Mansart (1632–33), is built around a circle with ovoid chapels around the perimeter **[48]**. The dome rests directly on the central cylinder, without the intermediary of pendentives, in an arrangement that recalls that of the chapel at Anet by Philibert De l'Orme, another great specialist in stereotomic design **[47]**. The façade of this small church is highly original, with its great arch encompassing entryway and oculus **[49]**. The chapel of the Collège des Quatre-Nations (today, the Institut), built by Louis Le Vau and François d'Orbay, is oval, as is the very curious and elaborate chapel of the Vieille-Charité at Marseille, built by Pierre Puget from 1671 **[46** and **45]**. At the Sorbonne Lemercier skillfully combined an apparently longitudinal plan, which the visitor grasps on entering the church by the façade to the square and a Greek-cross plan, the illusion of which one may have when one comes in by way of the courtyard **[44]**. This structure reconciles the dual function of the building: a Latin cross church for regular worship and the central plan for the funerary chapel of Cardinal Richelieu. The most dazzling of these centrally planned constructions is probably the dome of the Invalides, erected by Jules Hardouin-Mansart at the end of the nave of the church of Saint-Louis (from 1677 on) **[52]**. From the outside, the building seems independent, a harmonic form with a cubic base over two levels on which the drum sits surmounted by an attic story and the dome itself, with its fine lantern fitted with a genuine spire.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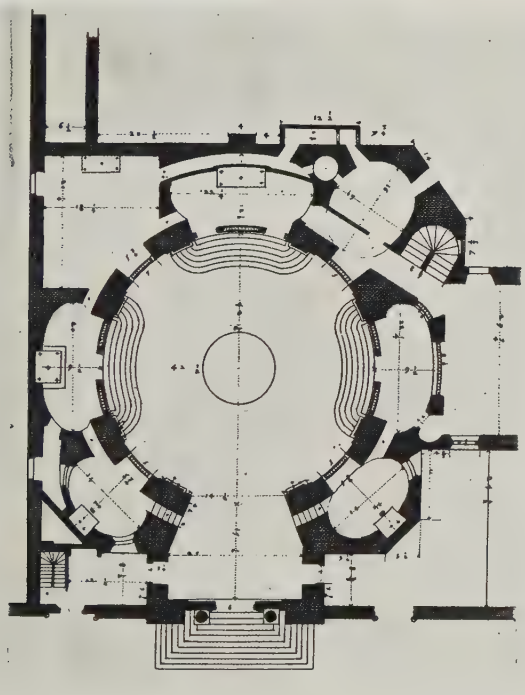

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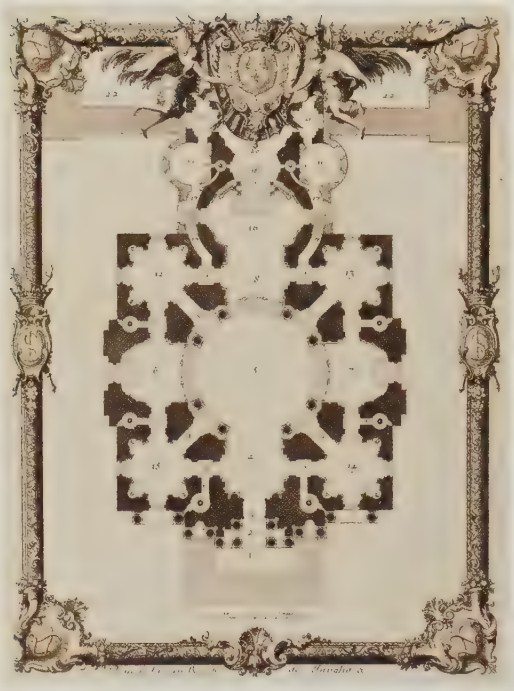

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50.
Jules Hardouin-Mansart, Hôpital des Invalides, Paris, exterior from the south.
51.
Jules Hardouin-Mansart, chapel of the Hôpital des Invalides, Paris, plane section of the dome (Abbé Pérau, *Description historique de l'Hôtel royal des Invalides*, Paris, 1756).
52.
Jules Hardouin-Mansart, Eglise Royale des Invalides, Paris, plan (Jean-François Félibien, *Description de l'église royale des Invalides*, Paris, 1706).

The mass of the lower section evinces an impression of great stability, while, contrariwise, the very slim appearance of the drum, dome, and lantern (presented at an angle) imparts strong vertical thrust. Sturdy columns all addorsed precisely define the successive planes of the façade **[50]**. Their rhythm, increasingly tight as it approaches the center, causes the central avant-corps to stand out. The lower portion of the drum is marked by twinned pillars, addorsed alternatively on the wall and on the powerful buttresses that prolong the vertical dynamism of the forepart upward and lead the eye to the ribs of the dome by way of the scrollwork on the upper drum. The interior of the space inscribes a Greek cross with a circular central zone; chapels occupy the spaces between the arms of the cross **[51]**. The median void is covered by a double cupola: the first, unclosed in the center, allows a glimpse of the second, lighted by windows in the upper reaches of the drum. Such embedding and the particular luminous effects it generates had been imagined by François Mansart for a building that was never built, the rotunda of the Bourbons, a vast funerary chapel designed for Saint-Denis. Jules Hardouin-Mansart probably unearthed the idea among the plans of his great-uncle. Besides it is not inconceivable that the dome of the Invalides was once envisaged as a chapel for the tombs of the Bourbons. Leaving aside the difference in dynasty, the placing of the tomb of Napoleon there has perhaps returned the building to its initial purpose.

It is hard to imagine what the atmosphere in these churches might have been like in the 17th century. Lined with tapestries, decorated in gold and brocade, alive with cantors, deacons, and the faithful, they must have appeared far more opulent than they do today. The furniture, often made by the most talented artists, and the spectacular spread of the interior architecture monopolized one's attention, with the choir, the high altar and the great altarpiece, the baldachin at the crossing, and the organ, which in general stood enthroned in its loft on the back wall of the entrance.

The theatrical design of the privileged place of the Mass itself must have been all the more spectacular since the Counter-Reformation eliminated the rood screens that obstruct the view: such ostentation bursts out in the chapel at Versailles, awash with

gold and light (1699–1710), and at Notre-Dame de Paris, on which after 1709 Robert de Cotte, Pierre Lepautre, and the sculptors Antoine Vassé and Nicolas Coustou all collaborated. The main altar itself often unfolds in supple, curved forms, as at the cathedral of Aix-en-Provence, whose altar was commissioned in 1718 from Bernard Toro. Retables in carved and painted wood of almost comparable splendor could be exhibited in far more modest sanctuaries, such as at the church of Notre-Dame-des-Anges at Isle-sur-la-Sorgue (Vaucluse), for example, where twisted columns frame a central picture representing the Assumption (c. 1690). In the chapel of the Jesuits at La Flèche (today the Prytanée Militaire or military academy), the main altarpiece and furnishings by Pierre Corbineau bestow remarkable lavishness on the church of Father Martellange (1633–37). Even the smallest sanctuaries in Provence, Savoy, and Brittany could be decorated by glorious sculpted ensembles. Permanent baldachins are rarer, but the church of the Val-de-Grâce contains an admirable one built by Gabriel Le Duc in 1664–65, perhaps to a design of Mansart's on the model in turn of the one Bernini had executed in Rome, which in addition had inspired another gorgeous plan by Pierre Puget.

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Organ cases too underwent major developments, corresponding to the apogee of instrument construction and of the music Louis Marchand, Nicolas de Grigny, and François Couperin composed for it. The French instrument now acquired thoroughgoing autonomy. In Italy, makers turned to ancient architectural types, a triumphal arch or an arcade inscribed within an order, within which after a fashion they ensconced the pipes. French case-makers adopted a different procedure. The cases were subjected to the particular development of the French-style organ which, unlike the Italian, disposed of many chests, each controlled by a specific manual and placed at different locations, thereby allowing the pipes to speak independently: such an arrangement obeys its own musical esthetics, which favors brilliant effects of contrasting stretches of sound or timbres. Therefore, the case generally presents the appearance of symmetrically juxtaposing upper elements—the *tourelles* (tower pipes)—with lower and broader sections—the *plates-faces*. French instruments adopt much the same five-part division as contemporary châteaux, alternating *tourelles* and *plates-faces* to both sides of a central *tourelle*, as at the Couperins's organ in Saint-Gervais-Saint-Protais **[53]** and the one at Saint-Étienne-du-Mont. But grander instruments can number seven, nine, and even seventeen divisions of this kind (Sainte-Cécile at Albi). If sculpture is always present, architectural decoration is more discreet. Columns and pilasters, which are still to be found in the Renaissance, disappear. The pipes on the frontage (those *de montre* in technical terms—the "face pipes") are relied upon to exude a sense of thrust. On the other hand, horizontal elements are conserved: piping is readily topped by an entablature. When the chests are designed by authentic architects employing a language of their own, they tend to be unfeasible: a rejected project by Pierre Laurent for Saint-Sulpice had been vilified by the carpenter Roubo as well by as the organologist Dom Bedos de Celles. And indeed it was hard to see how the instrument could have been placed in a circular baldachin of Berninian spirit—spectacular but not very functional.

The embellishment of Paris and other cities: palaces, squares, and public buildings

The capital of a country that aspired to European hegemony had to be adorned with monuments worthy of its glory. Henry IV and then Richelieu begun to embellish Paris and complete the palace of the Louvre; but it was during the reign of Louis XIV that the acme was reached, with the prestige programs pursued by Colbert continuing into the 18th century. Unlike the situation in towns in Italy, in Paris there was no overarching urban plan: neither vast regular avenues nor majestic prospects were laid out, while the many new churches were not especially highlighted. There were occasional interventions to embellish the largest monuments, like the Louvre palace, and some new constructions such as the Collège des Quatre-Nations. On the other hand, vast squares were opened and graced with statues of the sovereign.

On her arrival in France, Henry IV's new spouse Maria de' Medici, accustomed to the luxury of the Palazzo Pitti, was amazed at the state of the palaces of the kings of France. The Louvre, still under construction, was confined to the small courtyard of the medieval palace modernized by the two wings built by Pierre Lescot. Its completion took all of the 17th century. Henry IV was determined to connect the old château with the residence at the Tuileries, and built the Grande Galerie (1595–1610). During the regency of Maria de' Medici and under Louis XIII, the quadrupling of the surface of the Cour Carrée was begun **[54]**. Lemercier added to the north of Lescot's building a second similar one and between them placed the Pavillon de

53.
Organ in the church of Saint-Gervais-Saint-Protais, Paris.
54.
Palais du Louvre, Paris, Cour Carrée (Louis Le Vau wing).
55.
Jacques Lemercier, Palais du Louvre, Paris, Pavillon de l'Horloge.
56.
Colonnade in the Palais du Louvre, Paris (Engraving by Sébastien Leclerc, 1677, Musée du Louvre, Paris).

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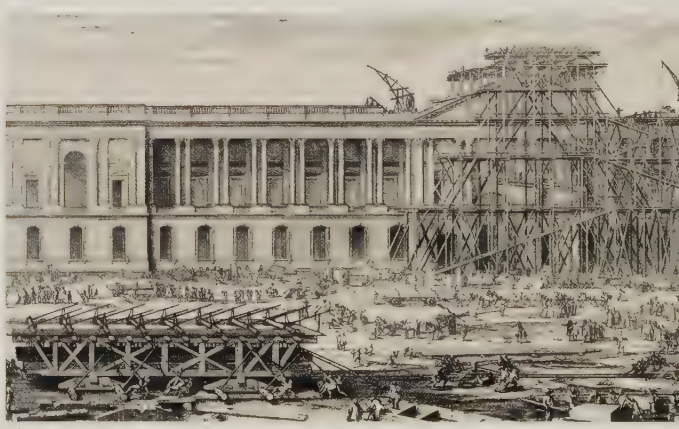
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57.
François Blondel,
Porte Saint-Denis, Paris.
Engraving by Perelle,
17th century. Châteaux
de Versailles and Trianon,
Versailles.
58.
Libéral Bruand and Jules Hardouin-Mansart,
Hôtel des Invalides,
entrance to the north front.
59.
Louis Le Vau,
Collège des Quatre-Nations,
Paris (Institut de France).

l'Horloge **[55]**, with its caryatids and inset pediments typical of the late 16th-century taste for the *orné*, thereby respecting the spirit of the decoration of Lescot and Goujon (from 1623). This enterprise was continued by Louis Le Vau, who doubled the return wing along the Seine (from 1654). With the ascension of Louis XIV, the great business in hand was the principal façade of the palace opposite the church of Saint-Germain-l'Auxerrois. In 1664, Colbert launched a kind of competition, in which the most famous French and Italian architects took part, including Pietro da Cortona and especially Bernini. Finally, the solution adopted in 1667 was the one proposed by a committee of French architects, of which Claude Perrault was probably the initiator. A rusticated plinth bears the celebrated colonnade with twinned supports **[56]**. The center and sides are distinguished by a tripartite rhythm of coupled columns, evoking a triumphal arch. The whole façade is thus divided into five, in accordance with French custom. Indeed, the overall design represents the glorification of the national *manière*: the fine twinned pillars echo precedents at Anet or Blois (by Mansart), the vast spans of the entablature between the columns testify to the tradition of French stereotomy. On the other hand, the absence of visible roofing was a total innovation for such a building; taken up at Versailles, this approach would henceforth characterize royal architecture. The Louvre was never completed. Although the palace seemed to proclaim the grandeur of the monarch, Louis XIV showed little interest in it; in spite of Colbert's efforts, he always preferred to devote his attention and a substantial proportion of funding to the construction of Versailles.

In satisfaction of a clause in Mazarin's will, Le Vau began the construction of the Collège des Quatre-Nations, a building opposite the Louvre completed in 1672 by Orbay **[59]**. It is remarkable at once for the plan of the chapel already referred to and for the concave frontage giving on to the Seine. Infrequent in France, such dynamism clearly echoes Roman precedents. Established on the initiative of Louis XIV, the hospital of the Invalides was built from 1670 by Libéral Bruant, the construction of the church and chapel being entrusted to Jules Hardouin-Mansart. Its grid plan quite naturally refers to Italian and Spanish forebears (the Ospedale Maggiore in Milan, the

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Tavera hospital in Toledo), but more especially to the Escorial; the austere façades of the various courts are in keeping with the purpose of the building, designed to house wounded soldiers; but the gateway, rather original its design with a broad arch borne on Ionic columns over both levels, does much to embellish the city **[58]**. The same might have been said of the vast square to the side of the chapel, partially enclosed by two arms forming a quadrant—an unrealized project referred to by Jean-François Félibien (*Description de l'église royale des Invalides*, 1706).

Improving the city went hand in hand with glorifying the sovereign. Triumphal arches were erected to the glory of Louis XIV at the *portes* of Saint-Denis **[59]** and Saint-Martin. Squares or *places* were invariably conceived as architectural ensembles organized around the effigy of the monarch. The first royal square was the place Dauphine, ordered by Henry IV at the tip of the Ile de la Cité (from 1607) and open at the extremity, opposite the equestrian statue of the king set up in 1614. Its elevations in brick and stone reappear on the place Royale (now, place des Vosges), started in 1605 in the new *quartier* of the Marais and furnished with a statue of Louis XIII in 1639. During the reign of Louis XIV, Hardouin-Mansart designed the octagonal place Louis-le-Grand (place Vendôme) **[60]**, and, on the initiative of Marshal La Feuillade, the circular place des Victoires **[61]**. These *places* possess similar elevations: a ground floor with low rustication (as at the Luxembourg or at

61

Versailles) supports two levels joined by a Colossal order of pilasters; a double-pitched roof with attic windows crowns the whole. This type met with great success, which was to persist in Paris to the time of Baron Haussmann.

Among the great squares designed in France to the greater glory of Louis XIV, mention should be made of Pierre Puget's plans for a royal *place* in Marseilles (1686), which would have extended in line with the Old Port. The drawings preserved show an oval complex bordered by regular façades with a base of rusticated arcades bearing

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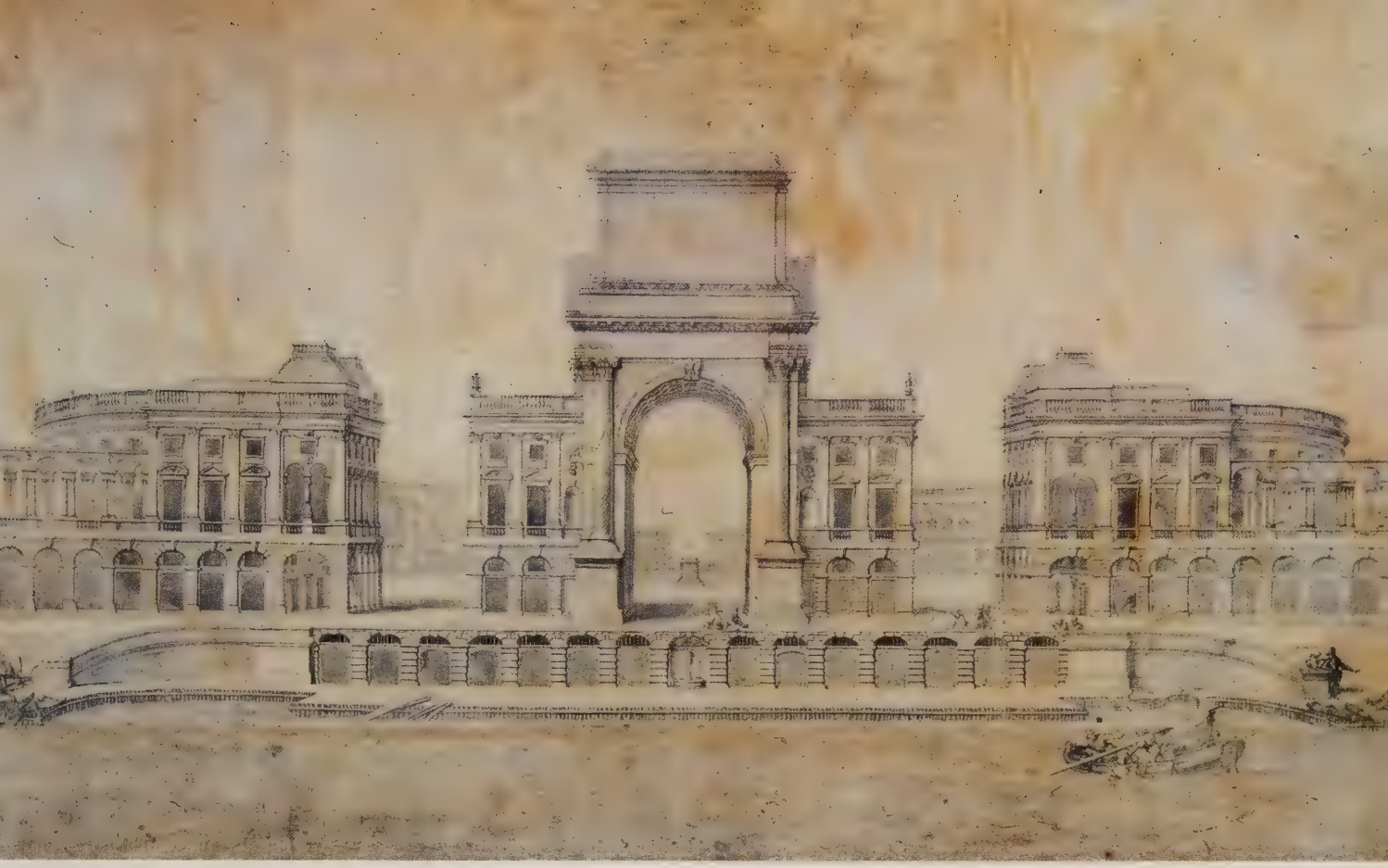

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a principal floor with regularly placed apertures; at the entrances of the *place*, in line with the minor axis of the oval, there would have risen triumphal arches enhanced by the giant pilasters on the buildings nearby **[62]**. This Italianate concept—Puget had trained in Genoa and Rome—reveals the architectural genius of an artist best known as a sculptor. Puget did a great deal to reshape the city: a few years earlier, he had designed an opulent if odd plan for the city hall (1663), and built the noble façades of the great court (today cours Belsunce), of which unfortunately only a few mutilated remnants remain today. The hospital of the Charité, whose building, developing from his plans of 1671, continued until the middle of the 18th century, and the fish market, started in 1682, survive as testimony to this design.

Every city in the kingdom benefited from the policy of glorifying the sovereign, in particular those cities that had been recently annexed to the kingdom, such as Lille, where Simon Vollant built the majestic Porte de Paris **[63]**, a triumphal arch where the Doric order stands out against some fine rustication, imposing upon this Flemish city at the same time the new authority of the king of France and a new French style of architecture that was to dominate in constructions in the new districts around the rue Royale. This "Francization" of the provinces continued over the following century, in Strasbourg for example, where from 1727 the Cardinal de Rohan built an episcopal palace on which the architect Robert de Cotte bestowed all the characteristics of the French style, even if the red sandstone is typical of the province, and if the sheer size of the project is rather reminiscent of the vast abodes German prince-bishops were then constructing on the other side of the Rhine.

In the 18th century royal *places* sprung up all over France. In Paris, Ange-Jacques Gabriel unveiled a design for the place Louis-XV (nowadays, the place de la Concorde),

60.
Jules Hardouin-Mansart, place Louis-le-Grand, Paris (now place Vendôme). Engraving by Perelle.
61.
Jules Hardouin-Mansart, place des Victoires, Paris.
62.
Pierre Puget, *Projet de place royale pour Marseille, vue perspective en regardant la ville*, second half of the 17th century. Musée des Beaux-Arts, Marseilles.

open to the river, with frontages inspired by the colonnade of the Louvre (from 1756) **[65]**. In Bordeaux, modernized on the instigation of the *intendants* Claude Boucher and the Marquis de Tourny, Jacques Gabriel, father of the former, was designing from 1733 a place Royale **[66]** (now place de la Bourse)—"half a place Vendôme at the water's edge." Alençon (place Foch), Rennes (place de la Mairie), and Toulouse (place du Capitole) all acquired vast constructions more or less inspired by the place Louis-le-Grand. Place Stanislas in Nancy, by Emmanuel Héré, is particularly elegant thanks to Jean Lamour's dazzling ironwork **[64]**.

In French towns in the 17th century a new architectural type appeared: the (public) theater. The building was born at the same time as the cultural and literary genre was coming into its own; the plays of Corneille, Racine, and Quinault demanded structures worthy of them, and the opera, which Mazarin and then Lully had naturalized in France, demanded a vast machinery that needed something much better than the makeshift trestles of the strolling player. Richelieu adored the theater, so that the first permanent house in France was the one set up by Lemercier in the Palais-Cardinal in 1635. Then, in the Tuileries, Mazarin fitted out the "*salle des Machines*," where the Vigarinis unveiled the first theater *à l'italienne* in the (horseshoe) shape of a "decapitated egg." Opening onto a sizable stage, this type allowed the construction of numerous boxes from which theater-goers could chat and mingle amongst themselves. The French originality resides in the architectural treatment of the auditorium, which often had a colonnade whose effect was very different from the Italian "wall of boxes," as well as in the design of the entrances: the staircase, in particular, gained greatly in importance.

63.
Simon Vollant,
Porte de Paris, Lille, exterior.
64.
Emmanuel Héré
and Jean Lamour,
place Stanislas, Nancy,
fountain.
65.
Ange-Jacques Gabriel,
place de la Concorde, Paris.
Watercolor by Louis Nicolas
de Lespinasse, 1778.
Musée Carnavalet, Paris.
66.
Jacques V Gabriel
and Ange-Jacques Gabriel,
place de la Bourse, Bordeaux.

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67.
Victor Louis,
Grand Théâtre, Bordeaux,
stairway.
68.
Château de Versailles,
marble court.
69.
Château de Versailles,
view of the garden façade,
oil on canvas, anonymous,
c. 1675. Châteaux de Versailles
and Trianon, Versailles.
70.
Château de Versailles,
Galerie des Glaces
(Hall of Mirrors).

67

The first Quarrel of the Buffoons and the affair of the *Mariage de Figaro* demonstrate the importance of the theater and the opera in the social life of 18th-century France, where noble and bourgeois alike went as much to be seen as for the show on stage. All larger cities had their theater, from Aix-en-Provence (1757) to Lille (1785), and of course the Odéon in Paris (1778). The Grand Théâtre at Bordeaux, erected by Victor Louis from 1772, is the finest example of this late flowering. The house reverted to a traditional form, with stalls without seating and banks of boxes. But the building stands out above all for its exterior appearance and the importance of the public areas: the Corinthian colonnade at the entrance opens on to a vast lobby above which is located a concert hall. This is followed by an ostentatiously decorated and majestic staircase that provides access to the various tiers **[67]**. In terms of functionality and sheer size, the work of Victor Louis prefigures the Paris Opera by Charles Garnier.

Versailles and its outbuildings

At the beginning, Versailles had been a creation of Louis XIII, who had the first buildings erected there in about 1621, followed, ten years later, by a small brick and stone château organized around a moated rectangular court. The king would rest his legs after hunting in the company of a handful of trusted friends. Impressed by Vaux, Louis XIV was unlikely to be satisfied with the traditional court residences of Fontainebleau and Saint-Germain. He quickly decided to transform his father's little "house of cards" as Saint-Simon described it into a royal abode in keeping with the grandeur of his ambitions. Nevertheless, to the great regret of successive architects, he never opted to demolish the paternal residence, and so it continued to provide the cell around which the palace had to develop throughout his reign **[71]**.

The works entrusted to Louis Le Vau from 1663 were initially limited to embellishing the château. At this point, it was Le Nôtre who played the key role, because the garden was used as a backdrop to sumptuous festivals, such as the *Plaisirs*

de l'Île enchantée in 1664, before growing still more extensive. In 1668, the king decreed that the palace was to be enlarged. Le Vau imagined inserting the old building into a new, wider château fabric that doubled it on three sides **[68]**. The old courtyard remained, with the Marble Court retaining its brick and stone elevation, its slate roof tiles, and its entablature broken up by windows **[69]**. But the elevation of the façade to the garden was very different. On a base with smooth rustication laid out in continuous bands, reminiscent of the Luxembourg, Le Vau placed a principal floor of Ionic order topped by an attic similar to that of Lescot at the Louvre. With a concealed roof, this elevation would have seemed consummately Italian, were it not for a lively group of projections **[70]**. In the center of the noble floor, Le Vau created a broad terrace framed by two ranges with their own avant-corps complete with columns and statues. This terrace was enclosed by Le Vau's successor, Jules Hardouin-Mansart, who in 1678 installed the celebrated Galerie des Glaces (Hall of Mirrors) **[73]** and created in the center a third, broader forefront, introducing a novel element of verticality into what is a highly elongated façade **[74]**. The detailing is admirable: the Ionic capitals from which tumble flowers, trophies, and fire vases are treated with exquisite grace. The taste for the delicate ornament, born from the chisels of the sculptors of the Flamboyant Gothic and adapted to classical forms by Lescot, was still a distinguishing characteristic of the French manner.

68

69

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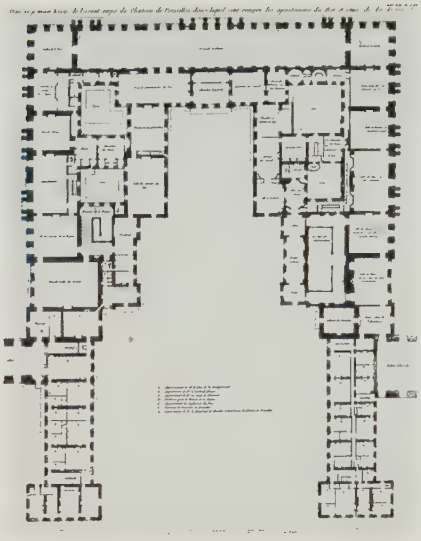
71.
Pierre Patel,
Vue du château de Versailles et de ses jardins, oil on canvas, 1668. Châteaux de Versailles and Trianon, Versailles.

72



73

It was the fate of Versailles under Louis XIV to always appear too small. The interventions of Hardouin-Mansart from 1678 consisted in lengthening the château toward the north and south with two long wings that replicate the elevation of the central part. This disproportionate elongation (nearly 500 meters) mars the overall effect: considered as a whole, the building seems too low and, in spite of the breath of air brought by the columnated fore-parts, does not manage to avoid monotony. To the side of the entrance, the château develops a long corps that housed not only the services but also the offices of the government when Versailles became the capital of the kingdom. Beyond the *place*, between the roads that form a *patte d'oie* intersection, Hardouin-Mansart placed the vast, horseshoe-shaped outbuildings of the stables (1679); farther out still, a whole new city was rising. Louis XIV succeeded doing in Versailles what his father's minister had not been able to carry out at Richelieu.

74

75

72.
Jules Hardouin-Mansart,
Château de Versailles, Bosquet de la Colonnade.
73.
Château de Versailles, plan, c. 1685.
74.
Château de Versailles, garden front.
75.
André Le Nôtre,
Château de Versailles, gardens.

Probably the most beautiful realization in Versailles is the garden created by Le Nôtre **[75]**. Reworking on a larger scale the principles of the gardens at Vaux, it is organized according to a longitudinal axis running east–west, which extends ad infinitum with a north-south perpendicular passing in front of the château. These axes revolve around great expanses of water in the French taste: the Basin of Latona, the Basin of Apollo, and the Grand Canal towards the west, the *pièce d'eau des Suisses* in the south, the Basin of Neptune to the north. But the symmetry is only skin-deep and formal rigor is often tempered by the surprises reserved by the *bosquets* ("thickets"), where the visitor might discover at the corner of some avenue a water feature or an expressive sculpture, such as Gaspard and Balthasar Marsy's *Encelade*, half-buried under the rocks, or full-fledged structures, such as Hardouin-Mansart's circular colonnade **[72]**. In spite of the immense difficulties posed by the unforgiving nature of the terrain, Louis XIV managed here to "subdue nature." The garden, itself subjected to the castle, is a striking expression of royal grandeur. It was destined to become a model for all Europe.

Throughout his reign, the increasing solemnity of life at court meant that Louis XIV was always on the lookout for intimate hideaways where he might relax from the rigors of etiquette. The first of these retreats was built in 1670 by Le Vau at the end of the northern arm of the Grand Canal. It was a centrally planned little château, roofed in slate, and faced with delftware tiles **[77]**: the "Trianon de Porcelaine" was a pendant to the Menagerie set up at the other end of the arm of the Canal **[78]**. In 1687, Jules Hardouin-Mansart erected at the site of the Porcelain Trianon a new and very different building, the Marble or Grand Trianon **[76]**. This strange construction consists in two *corps de logis* on one floor, without apparent roof, joined together by an openwork portico open to two sides; this provision allows one to appreciate to the full the flower beds planted by Le Nôtre. This extremely original idea was probably the creation of Louis XIV himself, who followed the construction of this little château castle very closely and would have had the last word.

76

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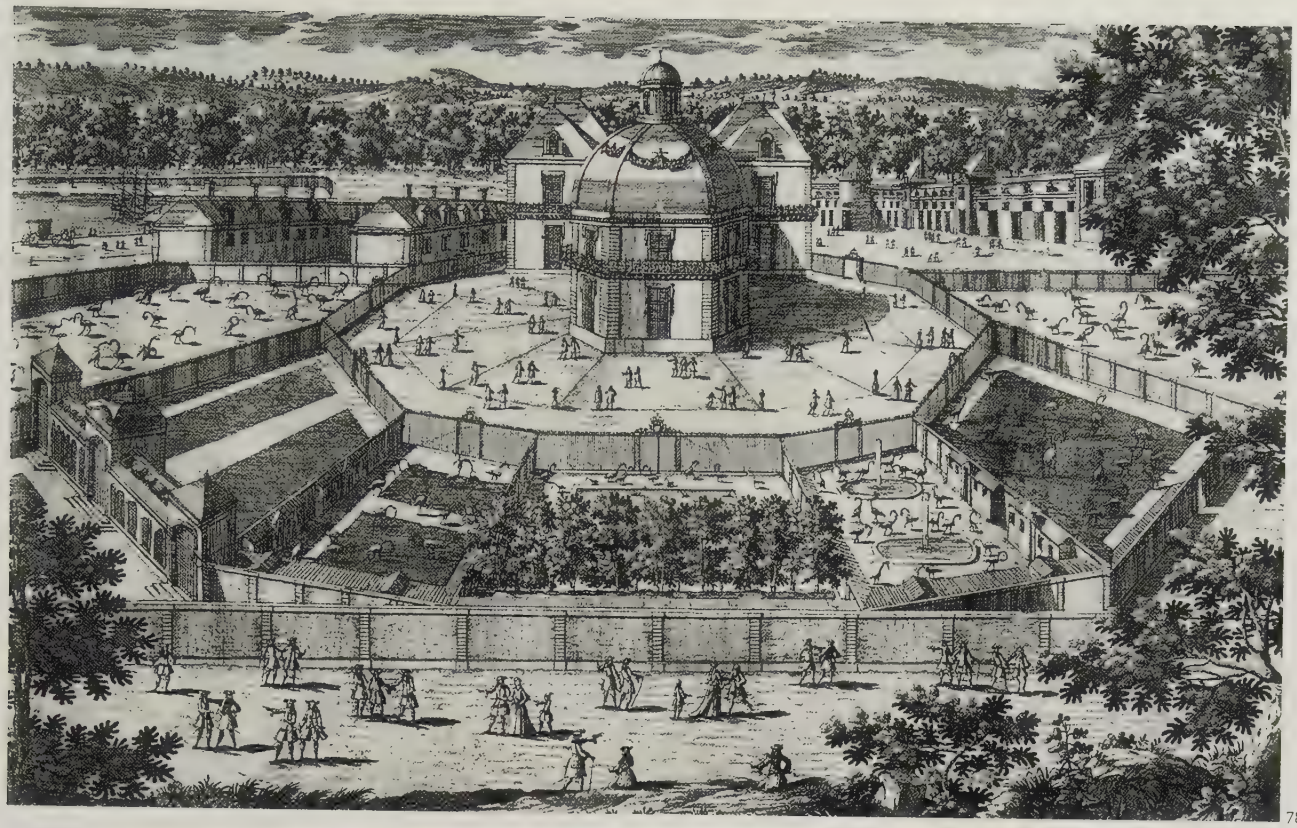

78

79

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76.
Jules Hardouin-Mansart,
Grand Trianon, Versailles.
Colored copper engraving
(after a drawing by
Pierre Lepautre).
Private collection, Paris.
77.
Louis Le Vau,
Trianon de Porcelaine,
Versailles. Engraving by Allard,
17th century. Châteaux
de Versailles and Trianon,
Versailles.
78.
Louis Le Vau,
Menagerie, Versailles.
Engraving by Antoine Aveline,
Vue et perspective de la
Ménagerie de Versailles.
Châteaux de Versailles
and Trianon, Versailles.
79.
Jules Hardouin-Mansart,
Château de Marly,
oil on canvas
by Pierre Denis, 1724.

80

In 1679, the king ordered the construction of Marly, a glorious ensemble since destroyed **[79]**. The château consisted in a main pavilion in which the king would reside located on a central axis formed by a vast pool terminated by an absolutely enormous "watering place" (the *abreuvoir*). To either side of this axis, six smaller pavilions housed the courtiers lucky enough to be chosen to accompany the king. This highly original structure in independent units probably possessed a symbolic or mythological meaning, as each little house bore the name of an Olympian divinity. The king's pavilion was special in being centered in plan and with an octagonal Italian-style reception hall in the middle—a novel variation on the theme of Chambord or the Villa Rotonda. Without, the Colossal Corinthian order, with narrow bays entirely decorated with for the most part painted motifs up to the entablature, illustrates the enduring taste for vertical arrangements.

Construction and extension work at Versailles continued apace throughout the Ancien Régime. The chapel of Hardouin-Mansart, with its colonnade directly bearing

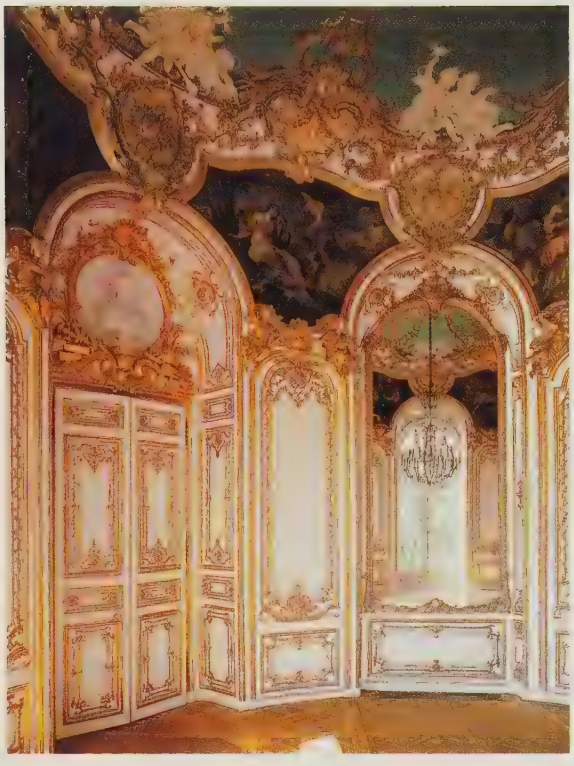
the entablature in a foretaste of the churches of the end of the 18th century, was erected between 1698 and 1710 **[80]**. The great Orangery at the Parterre du Midi, the vaulting of which is a masterpiece of stonework, was created by the same pen (1684–86). In the reign of Louis XV, many alterations were made to the interior apartments by Gabriel, who also built the Petit Trianon (1762–64) **[81]**. The last spectacular addition, the Hameau, with its farm and dairy, designed by Richard Mique for Marie-Antoinette, is of a different taste and style of architecture.

Toward the century of the Enlightenment

The beginning of the 18th century did not represent a new beginning in architecture to the same extent that it did in painting: there were no equivalents to Watteau and Chardin. On the contrary, the principal features defined by the Grand Siècle were then reaching perfection. Private architecture is characterized by a strengthening in the contrast between the refinement of the *dedans* (interior) and the apparent simplicity of the exterior. The principles of room arrangement honed during the previous century were further refined: this art of distribution reached its zenith, with an increased concentration on room specialization and on improving the freedom of movement of the occupants. Following the lead of Louis XV, who willingly forsook the majestic but uncomfortable ceremonial halls of his grandfather, private individuals too, driven by a new idea of wellbeing, went in for smaller, more agreeable rooms that would be easier to heat. Private apartments were added to their grander cousins: beyond the bedchamber, architects would make room for a boudoir or cabinet, a closet, a bathroom or even for rooms dubbed "secret"—a hidden staircase, a small dining room, a *cabinet*, or a less impersonal bedroom—because, as an architect of the time had it, "people like better to occupy a place where the floor is relatively low, where they are nice and snug, and where

81

80.
Jules Hardouin-Mansart and Robert de Cotte, Château de Versailles, interior of the chapel.
81.
Ange-Jacques Gabriel, the Petit Trianon, Versailles, court front.



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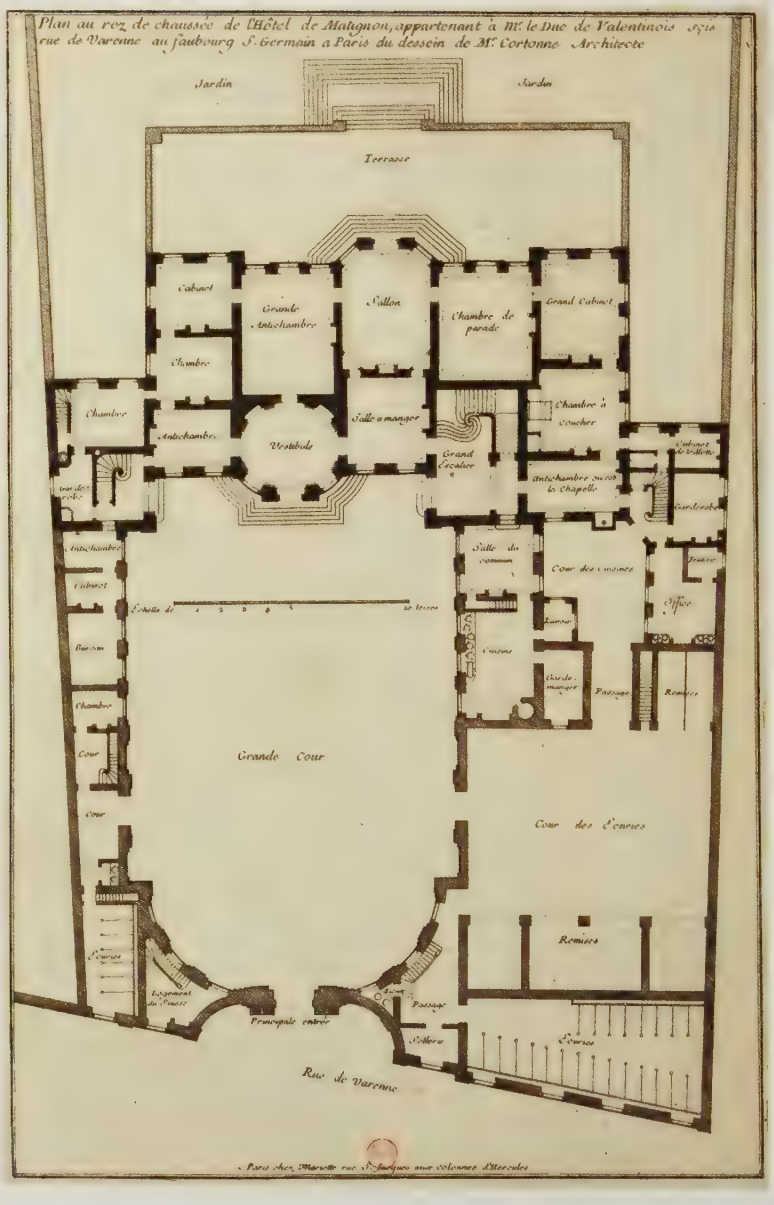
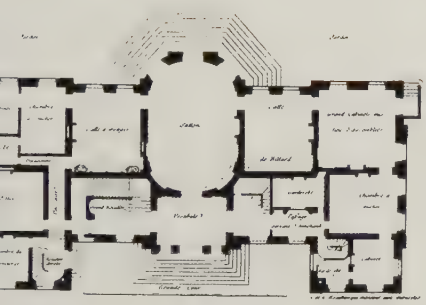


84

82.
Germain Boffrand,
Hôtel de Soubise, Paris,
view of the Salon Ovale in
the apartments of the princess.
83.
Germain Boffrand,
Hôtel Amelot de Gournay,
Paris, court front.
84.
Jean de Courtonne,
Hôtel Matignon, Paris,
plan of the ground floor
(Jean Mariette, *L'Architecture françoise*, Paris, 1727).
85.
Pierre and Jean-Baptiste Bullet,
Château de Champs-sur-Marne,
garden front.
86.
Pierre and Jean-Baptiste Bullet,
Château de Champs-sur-Marne,
plan of the ground floor.



they can be themselves."[9] To improve freedom of movement and especially to hive off the work of the domestics from the activities of the masters, corridors, passageways, and independent entrances multiplied. To increase the flexibility of the interior organization, one architectural innovation in a double *corps de logis* was to place the cross walls perpendicular to the frontage and no longer parallel. Thus, the wall bisecting the building rigidly into two disappears and the architect was free to vary the shape of the rooms set back. The Hôtel Matignon, built on rue de Varenne from 1719 by Jean de Courtonne for Christian Louis de Montmorency-Luxembourg, is a fine illustration of the perfection the French art of distribution had attained **[84]**. The residence was sold unfinished to Jacques de Matignon, who entrusted construction to Jean Mazin. As at the Hôtel de Jars, the courtyard lays off-center with respect to the plot, allowing space for a service yard. And, like at the *hôtel* built by Mansart, the doubling of the *corps de logis* made it possible to centralize the façades both to court and garden, but the result is not that two enfilades are simply juxtaposed on either flank of a longitudinal cross wall. Instead, the rooms are formed by walls perpendicular to the façades, dividing the bays so they can be disposed independently by partitions. The rooms can thus take on forms and dimensions adapted to their particular functions. Courtonne moreover made good use of the width of the plot in advancing the garden up the sides of the building; the side walls so released can thus be pierced by windows to light the corner rooms. Freeing the space up in this way made it possible to create a third room in the left bay. The Hôtel

9. Nicolas Le Camus de Mézières, *Le Génie de l'architecture…*, Paris, 1780, p. 89.

d'Évreux, the current Elysée Palace, built between 1718 and 1721 by Armand Claude Mollet, redeploys the key features instituted at the Hôtel Matignon. Many residences in this period display clever distribution of this kind, such as the Hôtel de Crozat and the Hôtel d'Évreux, built by Pierre Bullet (1702–07) behind the similar façades on the new place Vendôme, or the Hôtel de Soubise in the Marais (today the public records office, the Archives Nationales) erected by Pierre Alexis Delamaire in 1705. At the Hôtel Amelot de Gournay (1710), Boffrand introduced an oval courtyard that entailed some curious deformations on the staircase and the adjoining rooms **[83]**.

Châteaux too enjoyed the refinements of distribution, all the more so since some of them were little more than country retreats—residences close to Paris made fashionable by bankers and financiers. Champs-sur-Marne, built between 1703 and 1707 by Pierre Bullet and his son Jean-Baptiste for Paul Poisson de Bourvallais, recalls Vaux-le-Vicomte with its centralized plan and its *salon* in the middle projecting on to the garden. The absence of cross walls allows the rooms to be more flexibly laid out **[86]**. The private chambers are smaller, more comfortable and less onerous to heat; the passageways, dressing rooms, and concealed staircases become more numerous. The floors tend to be of equal height and the whole dwelling is enveloped by the garden. The Hôtel Peyrenc de Moras in Paris, today the Rodin Museum (or Hôtel Biron), a veritable urban château built at the end of Faubourg Saint-Germain by Jean Aubert on terrain acquired in 1727 and 1728, breathes the same spirit as Champs. It presents a similar centralized plan and affords views over the landscape from all sides. The cross walls meant it could be laid out three rooms deep. These maze-like abodes are the ideal theater for the nocturnal forays of a picaresque adventurer like Faublas or for the libertine strategies of the Marquise de Merteuil and the Vicomte de Valmont in *Dangerous Liaisons*.

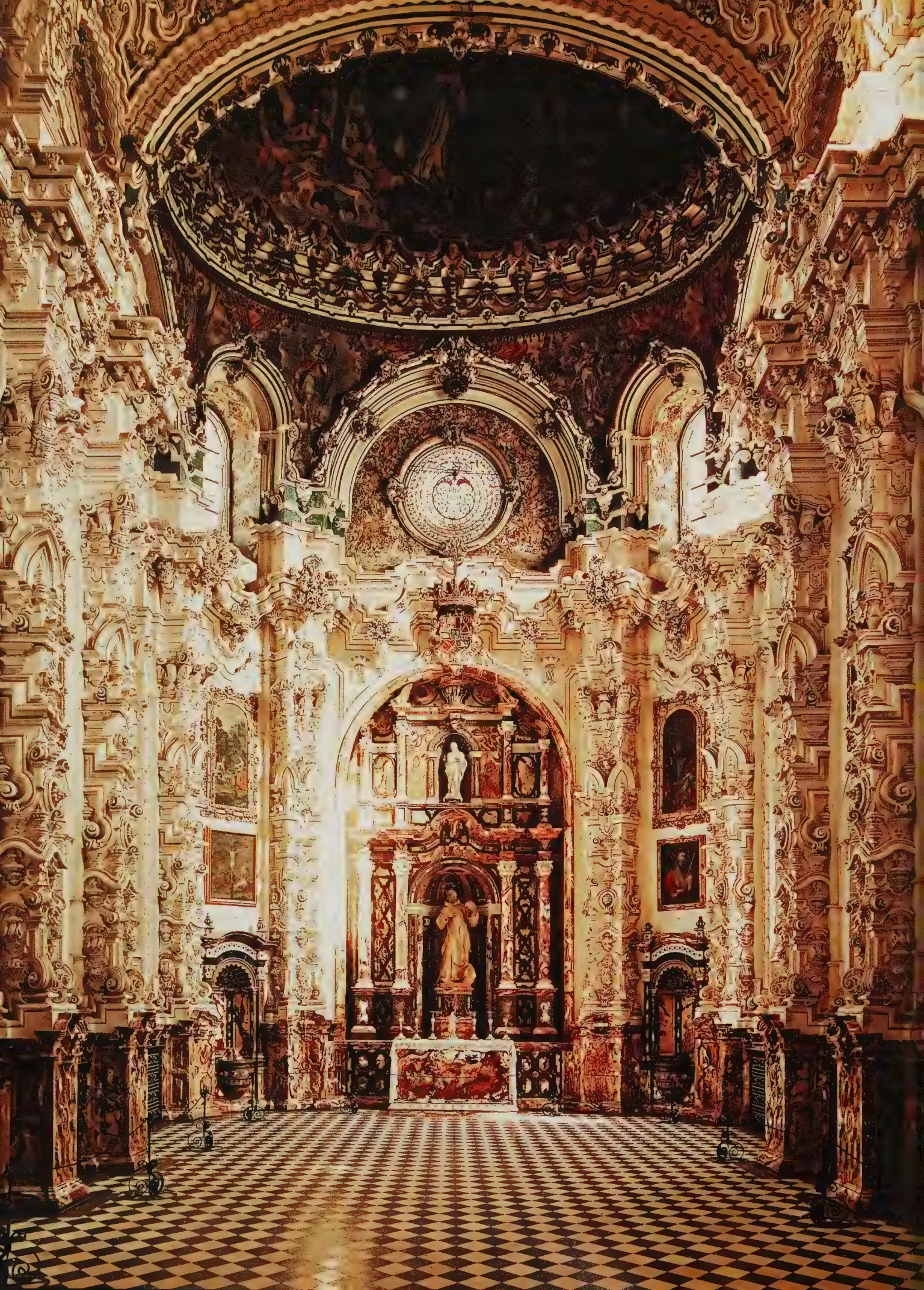
87.
Ange-Jacques Gabriel,
École Militaire, Paris,
garden front.

During the 18th century, the *agrément* (ease) of the interior was further reinforced by the enlarging of the window space: breast walls were lowered and "French" windows, which appeared in the previous century, became widespread, facilitating access to the garden. Skill in making wrought iron reached new heights, and railings, balconies, and banister rails became slenderer and more user-friendly. Interior décor too became ever more rich and refined: wood paneling was omnipresent, and the orders lost ground to the voluptuous curves of the Regency style, as at Germain Boffrand's Hôtel de Soubise (1755) **[82]**. In the second half of the century, this taste for "arabesques"—a new variant on the "grotesques" of the Renaissance—vied with the straight lines and right angles of the Greek Revival and it was never entirely vanquished.

On the other hand, the *dehors* was greatly simplified. In spite of obvious similarities in structure, Champs appears from the outside very different from Vaux: the pavilions project less, their double-pitched roofs are less individualized **[85]**. The effect of being a "block" becomes more perceptible; there were no *pavillons* at all at the Château de Montmorency (demolished), built in 1708 by Jean Sylvain Cartaud for Crozat the financier. The orders, still present at Montmorency but limited to the entryways at Champs, little by little recede, making way for bands of smooth rustication coursed vertically without toothing-stones: this is the case at the Hôtel Peyrenc de Moras. Thereafter, this exterior simplicity—which did nothing to prevent carved decoration being the object of special attention—was extended further in the Petit Trianon of Gabriel (1762–64) and in the little Château de Bagatelle, built by Paul Bellanger for the Comte d'Artois (1777).

The second half of the century saw the return of public orders of a scope not seen since the era of Louis XIV. Nothing of any size was built in Paris (save for the fountain of Grenelle by Edme Bouchardon in 1739), between the construction of place Vendôme (1685) and the place Louis XV (place de la Concorde, 1755). This square was laid out by the main architect of this revival, Ange-Jacques Gabriel, who was an artist open to many influences.

In the field of private architecture, he fits in perfectly with his time, as the Petit Trianon attests. On the other hand, place Louis XV shows a debt to the monumental style inaugurated by the Louvre in the 17th century. The École Militaire, started in 1751, also betrays its roots in the Grand Siècle. The main block, or "château," is of a highly articulated composition with pavilions roofed in a distinct style typical of the purest French manner. The imposing staircase is a worthy heir to the national tradition of stonework. Notwithstanding, the new taste transpires in the columnated peristyle decorating the central pavilion, completed it is true only in 1780, at a time when English influence and the revival in antique styles might explain what is a rigor bordering on the Hellenic. In this way, Gabriel, the last adept of the grand French manner, was also the first Neoclassical architect.



4 The Hispanic World

Architecture in Spain and in Portugal

AT THE BEGINNING OF THE 17TH CENTURY, Spain, like France, was heir to a strong architectural tradition. During the reign of Charles V, the generation of the *Aguilas* had drunk deep at the sources of Italian art. The Italian influence was also reinforced by political links between the two Mediterranean peninsulas, spawning a rather ornate architecture, with Pedro Machuca, Diego de Siloé, and Bartolomé Ordoñez, and the imposing austerity of Juan de Herrera in the Escorial, the gigantic palace-convent ordained by Philip II.

Permanence of the severe style: Francisco de Mora and his successors

During the reign of Philip III (1598–1621), Spanish architecture was still marked by the "severe style" stemming from the Escorial: the huge site itself was continued under the direction of a disciple of Herrera's, Francisco de Mora (1552–1610). Nevertheless, the court's move to Valladolid (1601–06) gave Mora the opportunity of erecting another vast royal residence, the Huerta de la Ribera, or Huerta del Rey (since disappeared). A working farm in addition to a place of recreation, in conjunction with its gardens this suburban palace formed a glorious ensemble connected to the city by a bridge (the Puente Major). The residence, richly painted with frescos, was endowed with a splendid hall and a superb staircase.

The architect also laid out the plans for the palace of the all-powerful minister and favorite, the duke of Lerma, in the city of the same name to the south of Burgos **[1]**. He designed an imposing building with sober elevations, incorporating the old fortress. After his death in 1610, his nephew Juan Gómez (1596–1648) unified the building with four towers when he built the *casa principal,* initially planned by Mora (1613–15). He also transformed the gallery (*lonja*) on the square and the riverside gallery (1615–16). Although altered, the preliminary design for the palace, characterized by regularity, horizontality (a smooth façade set off by the gateway), and decorative sobriety, is still perceptible, and it attests to Mora's taste for structures in pure lines, pared down to essentials. The principle of the central patio incorporating two superposed orders (Doric and Ionic), with arcades on the ground floor and *balcones* on the floor above, was original. Finally, its overall conception, with the porticoed plaza (1605–09), palace (1604–05), and convent, which benefit from the elevated site and the panorama, left a durable mark on Spanish city planning. The palace at Lerma recalls the Alcázar in Madrid, whose monumental frontage on the square was also designed by Mora and his nephew. In the same spare style, Francisco

1.
Palácio Ducal, Lerma, façade.

de Mora designed many churches in Valladolid, including San Pablo, destined to become the "Pantheon" of the duke of Lerma—he reorganized the façade and the Capilla Mayor—and the church of the Descalzas Reales, with its novel longitudinal space.

At San José in Ávila (1603), Mora created the archetypal Spanish Counter-Reformation church. If the lengthwise plan, the nave bordered with side chapels, and the transept without projections allude in theory to the model of the Gesù, the placing of the monks' choir above the entrance is reminiscent of the Escorial, and the blind dome, and especially the rectangular façade over three levels crowned by a pediment with a portico on the ground floor, were innovations. The Carmelite friar Alberto de la Madre de Dios (fl. 1606–33) adopted this approach in the churches of the convents San Blas and Santa Clara in Lerma (1611–17). His most spectacular creation was the church of the royal convent of the Encarnacíon in Madrid (1611–15), a foundation of Margaret, queen of Austria. In keeping with Mora, he adopted a restrained longitudinal space, as in the Descalzas Reales in Valladolid, and for the façade he returned to the structure of San José at Ávila, but with colossal pilasters at the corners, a solution destined a long life. Francisco de Mora also used another type of plan at the college of the Society at Alcalá de Henares—a Latin-cross plan with a nave bordered by intercommunicating chapels bearing tribunes, a blind dome at the crossing of the transept; this plan was adopted by his nephew Juan Gómez for the church of the Jesuit college at Salamanca, the Clerecía.

At the church of the San Bernardo at Alcalá de Henares, the latter deployed an oval plan inscribed in a rectangle with four oval and two rectangular chapels, surmounted by a drumless cupola; as for the decoration, he was inspired by the Pantheon at the Escorial (twinned pilasters, dome without drum). Faithful to the style of his uncle, Gómez also constructed the Madrid prison (the Cárcel de Corte, today the Ministry for Foreign Affairs) and the southern front of the Alcázar. To plans by Herrera, he also built the Plaza Mayor (1617–19), with a powerful basement, thereby contributing to the architectural typology of a unified urban space, at once a focus of trade, promenading, and festivals. The façade of Santa Cruz in Medina de Rioseco betrays the influence of the Gesù, which it reinterprets.

Innovative research on plans, volumes and the importance of cupolas in ecclesiastical architecture was also undertaken by the Jesuit brothers Pedro Sánchez (1569–1633) and Francisco Bautista (1594–1679), who transplanted Italian models. One of the most outstanding buildings is the church of the imperial college (San Isidro el Real) in Madrid, a site directed by Sánchez until his death, when Bautista took over. Sánchez, who had settled definitively in Madrid in 1619, imparted something of an Andalusian dynamism of non-Herreraian tradition (in the cruciform plan, treatment of the walls, the space and surfaces). He thus dislocated the rhythm of the supports, broke up the wall, and adopted rich decoration. Court architecture then was also gaining in dynamism **[2]**.

Spanish Baroque in the 17th century

2

From the 1640s on, Spain entered the Baroque era, following a path that was unique to it. The taste for an abundance of ornaments, inherited from the Plateresque, experienced extraordinary growth, giving a twist to Spanish art that was all the more astonishing since it contrasted so dramatically with the Escorial style. The stylistic metamorphosis had a forerunner in the very heart of this palace, however, with the plans for the Pantheon—the vault of the Spanish Habsburgs located under the altar of the basilica of San Lorenzo—instigated in 1617 by Philip III. The architecture was designed by Juan Gómez de Mora and the decoration by the Italian Gian Battista Crescenzi. The construction advanced very slowly; the site was still unfinished when the monarch died in 1621 and the sanctuary was only inaugurated in 1654. Octagonal in plan, it is intricately adorned with twinned Corinthian pilasters carrying a very elaborate entablature that divides the oblong alcoves intended to receive the royal remains. The cupola, it too abundantly decorated, is structured by radiating ribs resting on the pilasters, in a system that is not unlike that adopted by Bernini in his religious buildings, also employed by Gómez de Mora at Las Bernardas at Alcalá de Henares. In terms of plan, the most innovative work was the church of Nuestra Señora de los Desamparados in Valencia (1647–67), where Diego Martínez Ponce de Urrana integrated into the oval plan already adopted by Gómez de Mora in Las Bernardas at Alcalá de Henares a *camarín*—a small-scale sanctuary dedicated to the Virgin and located on an upper level, fully characteristic of Iberian Baroque **[3]**.

Façades were transformed into veritable open-air altarpieces, in keeping with a characteristic of Spanish architecture that had emerged in the Plateresque era: although the architectonic structure remains linear, the walls are covered in autonomous decoration. The façade teemed with orders and sculptures, as in the Charterhouse at Jérez de la Frontera (1667) **[4]**. Construction on the Baroque envelope of the cathedral at Santiago de Compostela started in 1649, with the dome raised only in 1665, and the clock tower in 1680: the old church was entirely subsumed, except for the Puerta de las Platerias at the end of the south transept. From 1667, Eufrasio López de Rojas worked on the façade of the cathedral at Jaén, for which Andrés de Vandelvira had

3

2.
San Isidro el Real, Madrid.
Lithograph by J. Cebrian.
3.
Nuestra Señora de
los Desamparados,
Valencia, interior.

already provided plans a century earlier (1532–34). More sober in ornament is the façade to the cathedral of Granada, erected in front of that of Diego de Siloé to plans by the painter and sculptor Alonso Cano (died in 1667), which evinces an original and sensual vertical dynamism with a two-level triumphal arch-type structure, where the walls retreat behind powerful, strongly projecting pillars.

From the Renaissance, Spaniards cherished a pronounced taste for ornamented supports, columns, and pilasters. By the 17th century in religious architecture they had adopted the Solomonic column, with its twisted shaft, a model bequeathed by the church of St. Peter's in Rome and which Bernini had amplified so gloriously in designing the basilica's baldachin. After 1595, the theme reappeared in Seville cathedral, in the tabernacle to the high altar, and in 1625 for the retable in the chapel of the relics of St. James the Great at Compostela (since disappeared). The use of barley-sugar shafts in larger altarpieces as well as on external gateways (*portadas*) became characteristic of the Spanish manner, celebrated in theoretical texts and practical applications.

Toward the 18th century: import and tradition

By the end of the century, architecture and city planning were making considerable strides thanks to the resumption of trade with the Indies and the advent of the dynasty of the Bourbons with Philip V (1700–1746) in 1700. A purely Italianate influence remains noticeable in some buildings actually designed by Italians, such as the monumental Collegium Regium of Loyola at Guipúzcoa, by Carlo Fontana in Rome (1681), and the tower for the new cathedral of Zaragoza (cathedral of the Pilar, 1683–85) by Giambattista Contini. Fontana's project, which was to incorporate the birthplace of

the founder of the Society, developed around a circular church at the center of the façade of the complex **[5]**. The cathedral at Valencia (1703–07) presents a façade with concave and convex surfaces, in a consummately Borrominian spirit, designed by the German architect Conrad Rudolf, who had trained in Paris and Rome. Then, on the arrival in 1714 of Elisabetta Farnese in Spain, Italian models gained wider currency. The cupola of Santa Maria at Elche (1745), by José Herrero, was inspired by Guarini. For the cathedral of Murcia, Jaime Bort y Meliá designed a highly ornate and dynamic frontage worthy of the great Italian achievements of the Seicento, even if the remarkable sculptural effect of the entryway, covered by a half-dome, reverts to more specifically Hispanic models (1743–48) **[6]**. The extant cathedral of Cadiz provides only an inkling of the imposing plan imagined by Vicente Acero y Arebo in 1725, which, to affirm the city's new supremacy, was meant to exceed that of Seville in dimension. The height of the towers should have been equal to the length of the edifice as designed. The plan combines a nave and a rotunda in guise of a choir, as at the cathedral of Granada. But the addition of a transept enclosed by two concave spaces transforms the interior space, creating the impression of a progressive elevation that renders the various sectors (dome, nave, choir, *camarín*) autonomous. At the same time, the diagonal arrangement of the supports bearing the vaults of the nave recalls processes dear to the Italian Baroque.

But it was in royal residences that the Italian influence primarily exerted itself. Philip V, grandson of Louis XIV, was set on building dwellings worthy of his rank. As soon as he ascended the throne, he voiced his wish to modernize the old residence of the Alcázar of Madrid, summoning Robert de Cotte for the purpose, but the War of the Spanish Succession (1700–12) sabotaged his plans. Neither did he manage to transform into a mini-Versailles the palace of Buen Retiro (1631–33), built by Alonso Carbonell to amuse Philip IV. In 1734, a fire at the Alcázar, however, did afford the opportunity of erecting a new palace. With this in mind, the king called on the services of one of the greatest architects of the period anywhere, Filippo Juvarra (1676–1736). Once in Madrid,

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4.
Charterhouse, Jerez de la Frontera, façade of the church.
5.
Carlo Fontana,
monastery of San Ignacio, Loyola. Lithograph, 1842.

Juvarra unveiled an imposing plan for the palace: the monumentally decorated if compact building, organized around a vast court, was to have exceeded in size the Regia at Caserta, and even Versailles. But Juvarra's unexpected death prevented him from seeing the project through, and it was taken over by a disciple, Giovanni Battista Sacchetti (1700–1764), originally from Turin. He reduced the dimensions of the palace, but, taking intelligent advantage of the unevenness of the site, conferred no less majesty on the pile. With its rusticated plinth bearing a Colossal order, the elevation inevitably recalls the style of Bernini. More exactly, the projecting parts in the center and the wings call to mind the third plan for the Louvre. This project undoubtedly introduced an Italian influence to Madrid: when, in 1745, Sacchetti was designing the monumental staircase, his drawings were submitted to a group of experts, which included three of the foremost architects then active in Italy, Ferdinando Fuga, Nicola Salvi, and Luigi Vanvitelli; it was again an Italian, the Sicilian Francesco Sabatini (1722–1797), a collaborator of Vanvitelli's at Caserta, who inherited the project on Sacchetti's death. The gardens of the palace, however, were laid out *à la française*, organized as in Versailles around basins and groups of sculpture.

Elisabetta Farnese made the Granja at San Ildefonso—a retreat amid wonderful scenery in mountains close to Segovia—into an official offshoot of the court. Two Italians, pupils of Carlo Maratta, Andrea Procaccini (1671–1734) and Sempronio Subisati (c. 1680–1758), began enlarging the palace designed by Teodoro Ardemans in 1723, doubling it by the addition of the patio of Herradura (a horseshoe), and endowing the collegiate church with a concave-convex apse typical of the Italian Baroque of the period. Juvarra contributed to the design of the garden front, so that it harmonized with the existing parts, and unified the whole with a Colossal order. The project was finished

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6.
Cathedral, Murcia, west front.
7.
La Granja de San Ildefonso, royal palace.

by his assistants [7]. The old royal residences (the Prado, Aranjuez) were modernized in the same spirit. The palace of Aranjuez to the southeast of Madrid was revamped under Ferdinand VI by the Italian Giacomo Bonavia (entrance front 1752; imperial staircase 1750–59), and then under Charles III by Francisco Sabatini, who added two return wings (1772–78). The palace served as a backdrop to a new city; the immense parade ground was enclosed by the small church of the convent of the San Antonio designed by Bonavia, a centrally planned construction with an undulating façade.

Notwithstanding, the Baroque taste in the Spanish manner was to survive, and even gained ground in religious architecture, local architects keeping their ecclesiastical clients to more traditional lines. More and more, architectural structures, invariably simple, were drowned under decorative profusion. The Solomonic column, widespread during the preceding century, was ousted by the *estípite*, a column of slender, upside-down pyramids. Churches were characterized by theatrical, dynamic, and abundantly adorned façades. In Andalusia, two architects dominate the period: Leonardo de Figueroa (c. 1650–1730) and Francisco Hurtado (1669–1725). The first was active mainly in Seville. His masterpiece, San Luis of the noviciate of the Jesuits (1699–1731), is a centrally planned church bordered by four semicircular chapels, in memory of Sant'Agnese, which also inspired the façade, with its two high towers flanking the dome. The treatment of volume in the central space, stressed by Solomonic columns and the chapels dissimulated behind altarpieces, is, however, fundamentally different. In the same way, the remarkable doorway to the college of San Telmo (1674), whose

thrust is confirmed by superposed orders with ornate shafts to a Plateresque pattern, contrasts with the remainder of the brick building.

Hispanic Baroque is especially conspicuous inside the church, in the *camarín,* but also in the *sagrario,* a sanctum located behind the main altar and reserved for the veneration of the Blessed Sacrament and often placed in a *transparente,* a subtly lit construction that soars up to the top of the building. Hurtado, a military engineer and architect who began his career at the *camarín* of the church of Nuestra Señora de la Victoria in Málaga (1693), was especially productive in the *sagrarios* of the charterhouses in Granada (1704–20) and at Paular, near Segovia (1718–23), which both show his talent for structural variation: at the charterhouse of Granada, the square plan is enlivened by corner columns supporting the circular cupola; these columns themselves are masked behind false curtains that turn it into a real little church with a restrained décor. At Paular, the central space is amplified by a crown of radiating chapels.

The stylistic exuberance of these ornate ensembles inspired one of the masterpieces of the Spanish Baroque, the sacristy at the charterhouse of Granada, built a few years later (1732–45) by other artists, including perhaps Tomás Jerónimo de Pedraxas **[9]**. In spite of its very simple plan, a rectangle terminated by an oval space, the interior is striking for its ingenious composition, which combines the opulence of the materials with the whiteness of a stucco decoration studded with *estípites*. The ornamental effusion of the charterhouse influenced other buildings, such as José de Bada's basilica of San Juan de Dios (1737–59).

Remaining outside this movement, Diego Antonio Díaz (c. 1680–1786) retained a taste for surfaces animated by linear decoration (façade of San Miguel in Morón de

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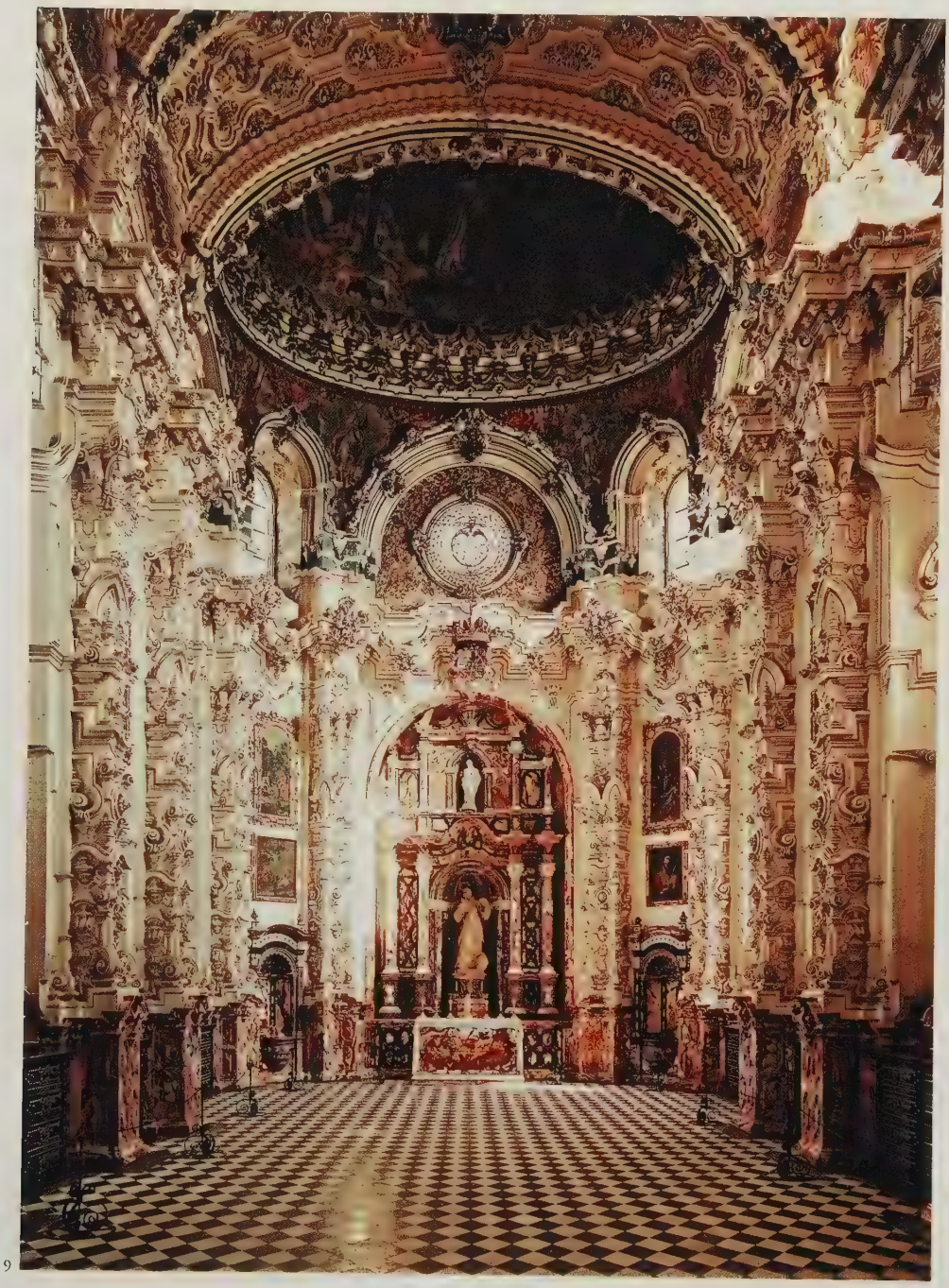
la Frontera, 1717–26; parish church at Umbrete, close to Seville). The north of the country (Castille and Léon) is celebrated for the brothers Churriguera, architects and sculptors. The elder, José Benito (1665–1725), who lent his name to a spectacular Baroque style (the Churrigueresque), built the new city of Nuevo Baztán for his protector, the financier Juan de Goyeneche. His younger siblings, Joaquín (1674–1724) and Alberto (1676–1750), worked primarily in Salamanca, where the latter designed ambitious plans for the Plaza Mayor (1729) **[8]**, the biggest in all Spain. Slightly trapezoidal in plan, it is enhanced on each side by an asymmetric pavilion on high continuous arcades that are also the ends of the city's main axes. He only designed the east (with the royal pavilion) and south sides, which were completed in 1738. The site of the Plaza Mayor was completed in 1755 under the direction of Andrés García de

8.
Plaza Mayor, Salamanca.
9.
La Cartuja, Granada, sacristy.



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Quiñones, who respected Churriguera's project, but removed the planned towers in order to highlight the city hall (Ayuntamiento). Quiñones also finished the Clerecía in Salamanca in the Castilian Baroque style (upper reaches of the façade, crowning of the towers, and central pediment, great cloister and monumental staircase).

The central provinces of Spain also afford first-rate examples of this decorative Baroque. In Madrid, the city architect Pedro de Ribera (1683–1742) built the barracks (Cuartel del Conde Duque) and the hospital of San Fernando, with its glorious great doorway (1722–29) **[10]**. He also created fountains, the most beautiful of which is the Fuente de la Fama (1731–32); he completed the Toledo bridge in Madrid, which he surmounted with two oratories as finely chiseled as silverwork (1719–26). In Toledo itself, the cathedral ambulatory was sumptuously decorated by one of the finest pieces of 18th-century Spanish art, the gigantic *transparente* of Narcisco Tomé, a wondrous carpet of sculpture wrapped round a piece of veritable interior architecture (1721–32) **[11]**.

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10.
Hospicio de San Fernando, Madrid, gateway.
11.
Cathedral, Toledo, the *transparente* in the ambulatory.

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At the cathedral of Santiago de Compostella, Fernando de Casas y Novoa continued the work of his predecessors, José Peña de Toro, designer of several doorways (the Portico Real de la Quintana, Puerta Santo, and Puerta de las Abades) and the dome, and Domingo de Andrade, who in particular had designed the clock tower (1680), with its touches of Flemish Mannerism. De Andrade also designed the mighty *obradoiro* of the façade, inserted between the two west towers and completing the cathedral's whole Baroque exterior (1738–49) **[12]**.

Portugal

In spite of its annexation by Spain between 1580 and 1640, Portuguese architecture preserved its originality and its regional peculiarities. Thus, in the religious field, churches

in the north of the country generally have façades that are more decorated than in the south or in Lisbon where plans were more polished. Interiors everywhere, however, were highly decorative. In the 16th century, Lusitanian churches were characterized by rectangular plans, partitioned, and topped by a straightforward two-pitched roof. From the time of their arrival, the Jesuits took advantage of traditional models, as at São Roque in Lisbon (1565–73), a church without a dome, with a rectangular, compact plan. Very quickly, this type was combined with the example of the Gesù (Santo Antão, Lisbon, 1613–53; the church of the college at Coimbra, 1598–1640, thereafter the new cathedral, by Baltasar Álvares; the church of the seminary of Santarém, whose splendid façade dates from 1676). In the north of the country, Santo Lourenço (also known as Dos Grilos, 1614–22) in Porto and Santa Cruz at Braga (c. 1625) both present highly ornate façades, while in Lisbon the plan of Santa Engrácia, rebuilt from 1682 under the direction of João Antunes (c. 1645–1712), is a Baroque version of the St. Peter's designs of Bramante and Peruzzi. Antunes was also the creator of the sacristy of Santo Antão in Lisbon (1697), the octagonal church of Bom Jesus da Cruz at Barcelos (1705), and of the double oval church-cum-drawing room of the Menino Deus in Lisbon (1711–37).

During the 18th century, the Italian influence remained strong in Lisbon: Guarino Guarini's project for Santa Maria della Divina Provvidenza, the church of the Theatines in the capital, with its plan comprised of circles and ovals, its frontage all in curve and counter-curve, and its interior elevation with undulating pilasters, would have been the greatest Baroque composition. Another key piece of evidence is the São João Baptista chapel in the church of São Roque **[13]**, commissioned by King John V in 1742 from the creator of the Fontana di Trevi, Nicola Salvi, and Luigi Vanvitelli. The latter produced a wooden model and prepared all the elements in Rome before dispatching them to Portugal in 1747. It was in fact during the reign of John V (1706–1750) that the Baroque developed more fully thanks to the prosperity ensured by diamonds and gold mined in Brazil. One sign of this wealth is the impressive palace-monastery built from 1717 at Mafra not far from Lisbon by the German Johann Friedrich Ludwig, known as João Federico Ludovice (1670–1752), who trained as a goldsmith and who had worked in Rome. If the palace evokes in principle Philip II's Escorial, it differs from it in detail: the influences are as much Portuguese (dressings, multiple galleries) as Italian (church with

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12.
Fernando de Casas y Novoa, Santiago de Compostella, cathedral, *obradoio* on the west front.
13.
Luigi Vanvitelli and Nicola Salvi, São Roque, Lisbon, Capela de São João Baptista.

vestibule, bell towers, sculptures), and even Germanic (corner blocks) **[14]**. Just as international is the royal residence at Queluz to the west of Lisbon (from 1747), which keeps to a florid and decorated style, tempered by the influence of Versailles, here implemented by Mateus Vicente de Oliveira. The main courtyard is reminiscent of the Marble Court, while the ceremonial façade overlooking the garden, regularly divided by Corinthian pilasters, is animated by some whimsical window furniture **[15]**. To the west, the Frenchman Jean-Baptiste Robillon added a long wing with more sober decoration, rendered interesting by its columns.

After the terrible earthquake of 1755, the rebuilding of Lisbon was conducted by the all-powerful minister of Joseph I, Sebastião José de Carvalho e Melo, better known as the Marquês de Pombal. Several Italians, including Francesco Fabri (died 1807), played a significant role in overseeing the works. The lower city, laid waste by a tidal wave, was entirely rebuilt to a rational geometrical layout, culminating in the Praça do

14.
João Federico Ludovice,
Palácio Real, Mafra,
main front and basilica.
15.
Palácio Real, Queluz.

14

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Comércio (1760), ennobled by a triumphal arch. Despite this redevelopment, carried out in an Enlightenment spirit by the military engineers Eugénio dos Santos, Manuel de Maia, and Carlos Mardel, enthusiasm for the Baroque style persisted in Lisbon right up to the early 19th century. The Basílica da Estrela, built between 1779 and 1793 by Reinaldo Manuel and Mateus Vicente, clearly refers back to the architecture of Mafra.

The ornate style also spread to the provinces of the Norte. Claude de Laprade combined the Louis XIV style with the Italian manner in the splendid library at the University of Coimbra (1716–28), where Giacomo Azzolini (c. 1717–1791) from Bologna also worked **[16]**. Another Italian, Niccolò Nasoni (1691–1779), who arrived at Porto in 1725 after working in Milan and Lecce, built several villas (*solars*) and palaces in the Italian style: the Casa do Freixo in Porto (c. 1750–54), and the *solar* of Mateus, not far from Vila Real (c. 1739–43) **[17]**, where the contrast in materials usual in that region (gray stone and white coatings) did not exclude quotations from Borromini, such as the incurvate pilasters placed on pedestals with convex dados at the corners of the court. His masterpiece is surely the church of São Pedro dos Clérigos in Porto (1731–63), which presents an elliptical nave and a tower that has become the emblem of the city. In Braga, two prelates, Rodrigo de Moura Teles (1644–1728) and Gaspar de Braganza (1758–1789), bastard son of John V, spread the architecture of the court. André Soares (1720–1769) in particular designed the new façade of Nossa Senhora da Consolação (1769), the Casa do Raio (1754–55), and the chapels of Bom Jesus do Monte Espinho on the city outskirts. The complex was unified by the Neoclassical Carlos Amarante, notably with the basilica façade built in 1784 and the Way of the Cross, built over several levels and laid out with small chapels (the last of which was built in the 19th century), with its towering staircase decorated with large statues. The end result displays an undeniable talent for theatricality **[18]**. At Viseu, the Santa Casa da Misericórdia, with its two towers framing a particularly broad central section, is the perfect illustration of 18th-century Portuguese Baroque, which combines in perfect harmony a structural simplicity underscored by color contrasts and decoration in the Italian style **[19]**.

FOLLOWING DOUBLE PAGE
16.
University library, Coimbra, interior.
17.
Niccolò Nasoni,
Solar de Mateus, façade to the main courtyard.
18.
Church of Bom Jesus da Cruz, Barcelos.
19.
Santa Casa da Misericórdia, Viseu.

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19

The South American colonies

Spanish America

Spanish America boasts many remarkable buildings commissioned by representatives of the monarchy, the secular or regular clergy, or by wealthy land- or mine-owners (Mexico, Bolivia). Often, the paintings, sculpture, furniture, and decorative objects were imported directly from Spain. Disseminated by the viceroys or captains general, by the Church and by means of Spanish or Italian treatises dispatched from Seville or Cadiz, the architecture of the ruling state naturally influenced that of the colonies.

The religious orders were tremendously active in New Spain. The Jesuits imposed the model of the Gesù, which they adapted for the church of St. Francis Xavier at Tepozotlán (1670–82) (though devoid of tribunes) and the church of the Compañía at Quito, which combines Roman references (façade, plan) with Solomonic columns. But the old Jesuit church at Havana, started in 1742 (it became the cathedral after the

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20.
Cathedral, Havana.
21.
Church of Ocotlán,
Tlaxacala, (Mexico).

society was expelled), presents a rather Borromini-like façade **[20]**. Other edifices, few and relatively late, do incorporate Baroque elements (dynamic frontages, complex plans, and curved volumes). In Mexico City, the church of the Enseñanza was built to a plan with truncated sides bordering on the oval (Francisco Guerrero, 1772–78). Models from Italian treatises resurface for example at Guadalupe, not far from the Mexican capital, where the plan of the chapel of the Pocito (1771–91) is obviously inspired by an ancient temple reproduced in Serlio's treatise, specimens of which reappear overseas.[1] At Antigua (Guatemala), the circular plan of the building for the novices at the convent of the Capuchinas (c. 1731) is also undoubtedly borrowed from Serlio. In Lima, the church of Los Huérfanos (1759–66), attributed to Manuel of Torquemada or Cristóbal de Vargas, adopts an oval plan and domes; the whole cloister at the college of San Tomás (1783) is circular. In the Río de la Plata, Andrés Blanqui deployed a sober Baroque in his designs for the vaults and portico (1725–65) of the cathedral at Córdoba, and also at the Cabildo in Buenos Aires (1725–65). For the chapel in the Jesuit establishment at Alta Gracia, he opted for a transept with convex side walls.

As in Spain, the Baroque style took the form above all of lavish ornamentation applied to linear structures. At the same time, the architecture of the New World possesses a specificity relating to the diversity of the local materials (various colored stones) and, in the regions of the Andes, to a taste for rich if planar decoration, perhaps

1. Sebastiano Serlio, *Il terzo libro*, Venice, 1537, f. xxxi.

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in connection with Amerindian sensibilities. Most of the buildings are located in New Spain and in Mexico City. Elegant palaces were parroted from Andalusian models, with which the region entertained strong links, often covered in ceramics and furnished with extremely ornate apertures. The churches comprise one or two towers and their decoration is concentrated on the upper parts of the bell towers and the central zone, often with a polygonal top-piece above the doorway, the *imafronte*, as in the sanctuary

22.
Cathedral, Mexico City.
23.
Convent of La Merced, Antigua (Guatemala).
24.
Church of La Compañía, Cuzco (Peru).

23

of Ocotlán at Tlaxcala **[21]**. The larger cathedrals took several generations to build. Until about 1730, Solomonic columns remained in use (cloister of the Merced in Mexico City, completed in 1703, the basilica of Santa María in Guadalupe, façade of Nuestra Señora de la Soledad in Oaxaca, 1689). Later the *estípite* took over, integrated into an emphatically modeled, exuberant style, as at the cathedral of Zacatecas, the patio of the convent of San Agustín at Querétaro (1731–45), attributed to Ignacio Casas, and the church of the Valenciana near Guanajuato (1765–88). The cathedral of Mexico City and its *sagrario* compose one of the finest ensembles of the time **[22]**. Its façade is redolent of that of the cathedral at Jaén; the side doors, dating from the 17th century, marked the first appearance of the Solomonic column overseas. For the *sagrario*, the Andalusian Lorenzo Rodriguez, present in Mexico in 1731, returned to the Greek-cross plan of the cathedral of Granada, as well as for the *estípites*. Teeming over the frontage to the *sagrario*, this motif earned great currency in New Spain. San Francisco Acatepec, near Puebla, boasts an extraordinary polychrome ceramic variant.

Because Guatemala is so often prey to earthquakes, architecture there is heavier and sturdier than that of Mexico: the façades are often painted or whitewashed, with dense, vermicular decoration. The military engineer Luis Díez de Navarro, who arrived from Mexico in 1741, worked in the capital, Antigua. He was the creator of the palace of the captains general, reduced to ruins shortly after its completion following the earthquake of 1773. Significant buildings include the squat church of the convent of La Merced,

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whose façade is covered with vermicular ornament **[23]**, and the church of the convent of Santa Clara, with supports composed of affronted double S's—a pattern undoubtedly of Serlian origin and endemic to this country, in which the *estípite* is unknown. The treatment of the shafts, built up of piles of coussinets of unequal size, is similarly extremely original.

In 18th-century New Granada (today Ecuador, Colombia, and Venezuela), the Solomonic column was widely used for façades; church towers were often set on rusticated plinths. At Quito (Ecuador), Italian models held sway, as in the sumptuous façade of the Jesuit church of La Compañía, whose doorway flanked by twisted columns is emphatically modeled. Lima, the capital of the viceregal Peru, boasts two remarkable buildings. San Agustín (1720) is notable above all for its façade, a masterpiece of decorative exuberance. As for the palace of Torre Tagle (1735), its richness recalls that of Andalusia. The façade of the cathedral at Cuzco, like that of the church of La Compañía (c. 1664) **[24]**, expresses a powerful vertical dynamism thanks to the misalignment of the arches in the central section with respect to the side parts.

The Portuguese dominions

At the end of the 16th century, there remained only three trading posts in the Portuguese East Indian empire: Goa, Diu, and Damão (Daman). Consequently, Portugal turned to a more systematic colonization of Brazil, an immense country, which up to that point had supplied only timber and sugarcane. The architecture that emerged there in the second half of the 17th century hardly differs from that of the kingdom, even if the mix of populations and artistic sensibilities gave it a certain originality (sandstone ornaments standing out from white walls at Nossa Senhora da Graça at Olinda). For their churches, the Jesuits—a force to be reckoned with on the territory—again drew on models developed in the home country, as at the church of the college at Salvador, completed in 1672, which not long after was to become the cathedral, following the expulsion of the Society. The frontispiece (1679) was enriched by two towers in 1694. This type of façade reappeared later at the church of São Francisco Xavier at Belém (1718–19).

Numerous convents were erected or rebuilt by various religious orders following the departure of the Dutch. Their Baroque modernity is evident in the systematic adoption of the motif of the scroll (crowning of the frontispiece at the convent of São Bento at Olinda, 1761). São Bento in Rio de Janeiro is most remarkable of the Benedictine buildings of the 17th and 18th centuries. The Franciscans specialized in particularly homogeneous buildings (quadrilaterals organized around the cloister; façades with porticos and low pediments). The convent of São Francisco in Salvador, founded in 1686, is remarkable for its three-nave church and for the façade of the exuberantly decorated church of the Tertiaries erected by Gabriel Ribeiro (1701–03).

But it was during the 18th century that the Baroque in religious architecture truly came into its own. Notable examples include the oval plans at São Pedro dos Clérigos at Recife (1728–29) and São Pedro dos Clérigos (1733–38) in Rio de Janeiro, the new capital; the double ellipse of Nossa Senhora da Glória do Outeiro (c. 1714); and various sculptural façades, all conflicting curves and relief effects, with two side towers more or

25.
Church of São Francisco de Assis, Ouro Preto (Brazil), façade.

less set back. The Tertiaries of St. Francis and other brotherhoods played a leading role in the south of the country, which experienced an economic boom thanks to gold and diamond mining. São Francisco de Assis at Ouro Preto, the center of the wealthy province of Minas Gerais, is the most beautiful illustration **[25]**. More canonical Italian forms were imported by Antonio Giuseppe Landi (1708–1789) of Bologna, who traveled to Brazil in 1753 to collaborate on a project to map the Amazonian basin. At Belém, he built the palace of the governor of the Grão Pará (1767–71), the church of Santa Ana (1761–82), and the chapel of São João Baptista (1771–77).

Architecture could also be imported wholesale from the colonial country: the elevation and characteristic form of Nossa Senhora da Conceição da Praia in Salvador recalls the Menino Deus in Lisbon, while the façade evokes that of the church at Mafra. Civil architecture similarly bore the stamp of the new style, which flourished only tardily (palace of the governors, built between 1740 and 1750, the Casa da Câmara after 1784, the Casa dos Contos, 1782–87, at Ouro Preto), although it was to linger on until the beginning of the 20th century.

5 Baroque in Northern and Eastern Europe

Architecture in the Germanic lands and Eastern Europe

IN SPITE OF THE THIRTY YEARS' WAR, which devastated Central Europe between 1618 and 1648, artistic activity did not completely cease: in music, this was the era when Heinrich Schütz and Michael Praetorius were composing their masterpieces. In this particular context, architecture could even appear as an argument in the conflict between Catholics and Protestants. The Jesuit church of St. Michael in Munich, built at the end of the 16th century by Friedrich Sustris in a style combining Italian lessons and Gothic tradition, served as a model for many Catholic sanctuaries, from Innsbruck (1619–20) to Düsseldorf (1622–29). Roman models gained ground in the empire of Ferdinand II, as well as in Austria, as at the Jesuit churches in Vienna and Salzburg, and

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1.
Theatinerkirche,
Munich.
2.
Francesco Carrati,
Czernín Palace, Prague, façade.

in Hungary too, at Trnava (today in Slovakia). The Theatines too contributed to the Italianization of architecture, with the church built in Munich by architect Enrico Zucalli, originally from the canton of Graubünden, to plans by his compatriot Agostino Barelli: it was the opinion of the patron, Princess Henriette Adelaide of Savoy, wife of the Elector, Duke Ferdinand Maria, that Bavarians were "*troppo idioti per edificare*" (too stupid to know how to build). Except for the tortuous crownings of the bell lateral towers, the façade of the building evokes the order's mother church in Rome, Sant'Andrea della Valle **[1]**.

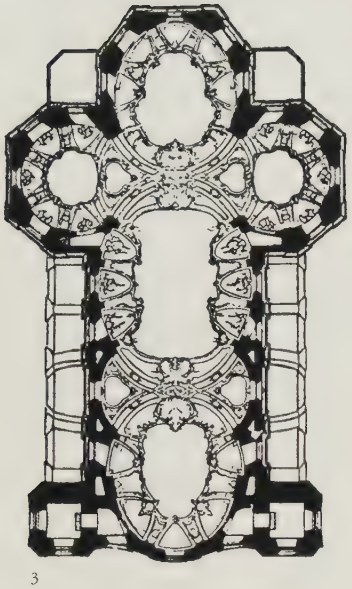
Civil architecture was marked by the creations of great lords, such as Albrecht von Wallenstein, one of the generals of the Thirty Years' War, a busy patron who commissioned artists, for the most part Italian, to build and decorate Prague's greatest private palace in the Malá Strana, with its sumptuous gardens. The return of peace saw the realization of large-scale works, invariably by Italians, such as the church of the Servites, in Vienna, by Carlo Carnevale (around 1650), and the façade of the Czernín Palace in Prague, begun in 1667 by Francesco Carrati, where the model of Palazzo Caprini is interpreted in an original way, with heavy diamond rustication and a Colossal order of engaged columns and extreme Bramantesque effects of relief **[2]**.

But it was in the 18th century that the most virtuoso Germanic architecture developed. Austrian and German practitioners retained from the lesson of Rome the principle of abundant ornament, which they applied inside sanctuaries: following the example of Sant'Andrea al Quirinale, the church of St. John Nepomuk in Munich (1733–46) by the Asam brothers is a total work of art, an authentic religious theater, but with an infinitely richer décor **[6]**. Furthermore, they understood and further

developed the experiments of Borromini, and more especially Guarini, on complex spaces with curved, especially oval outlines (Guarini actually produced a plan for the church of the Virgin at Oettingen in Prague).

In the Catholic Germanic world, façades, just like interior surfaces and volumes, feature a clever combination of opposing curved lines that create an impression of movement, instability even, that is sometimes bewildering, but always seductive. The finest examples are in southern Germany: the pilgrim church (Wallfahrtskirche) of Steinhausen (1728–31) and that of Die Wies (1745–54) **[4]** by Dominikus Zimmermann; the abbey of Ottobeuren in Bavaria by Simpert Kramer and Johann Michael Fischer (begun in 1757); and, more dazzling still, the church of Vierzehnheiligen close to Bamberg, built from 1743 on by Johann Balthasar Neumann (1687–1753). His plan, composed of juxtaposed oval units, is not without echoes of Guarini's plans for Santa Maria della Divina Provvidenza in Lisbon **[3]**. The opulent painted and carved interior and the effect produced in the nave by the dynamic-looking walls are extraordinary and typical of the architecture of southern Germany **[5]**.

The taste for richly decorated curved spaces also characterizes German civil architecture, as can be seen in the palace of the Nymphenburg in Munich, conceived in 1664 by the Italian Agostino Barelli and completed and decorated from 1734 to 1739 by François de Cuvilliés, an artist originally from the Low Countries but who trained in Paris. Another good example of the style is the palace of the Zwinger, built in Dresden for Augustus II of Saxony by Matthäus Daniel Pöppelmann, between 1709 and 1736 **[8]**. The Zwinger, the jewel in a city then being completely renovated by the sovereign, is a group of highly ornate buildings connected by more sober galleries.



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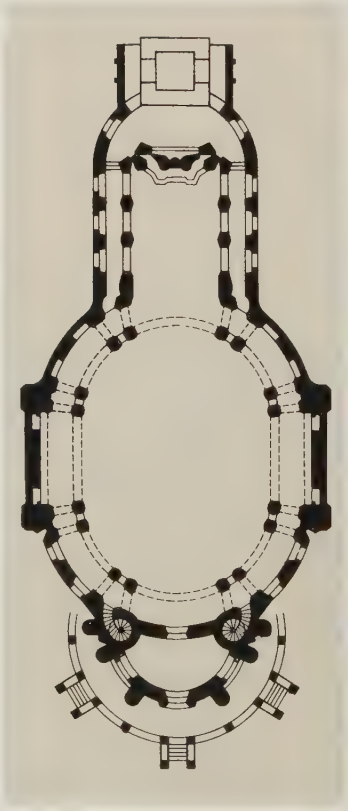
3.
Johann Balthasar Neumann,
church of Vierzehnheiligen, plan.
4.
Dominikus Zimmermann,
church of Die Wies, plan.
5.
Johann Balthasar Neumann,
church of Vierzehneiligen,
interior.
6.
Egid Quirin and Cosmas Damian Asam,
church of St. John Nepomuk,
Munich, interior.



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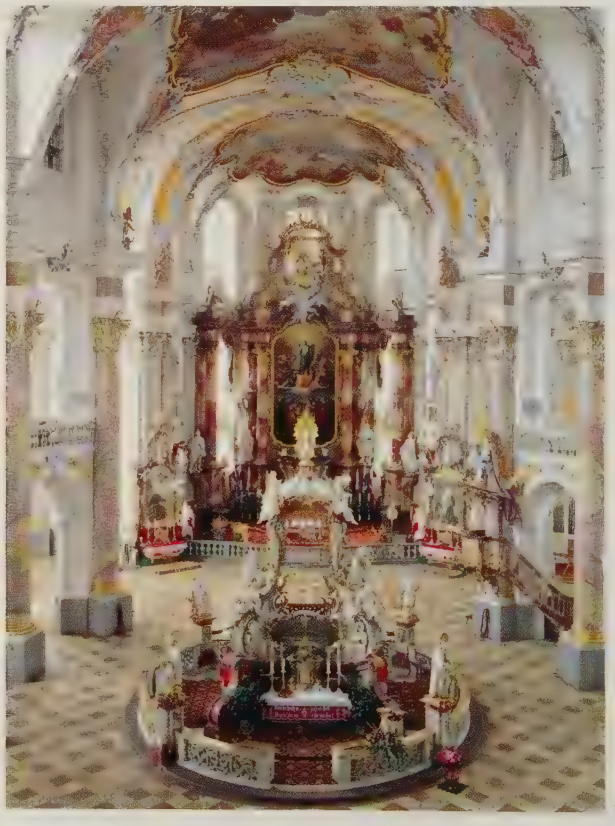

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6

A whole battery of brilliantly rhetorical effects is deployed: convex and concave façades, a dazzling variety of supports, tight, rhythmical arrangements, sculptural overload. And, with this Italian language there intermingle spectacular local forms, like the onion crown-piece on the entrance pavilion.

In other places, French influence was the stronger. When, in about 1720, Prince-Bishop Johann Schönborn was pondering the construction of his episcopal residence at Würzburg in Franconia, he consulted not only German and Austrian architects, but also Robert de Cotte and Germain Boffrand. Johann Balthasar Neumann, the architect in charge of the site, moved to Paris in 1732 to seek advice from his French colleagues, and in turn Boffrand made the journey to Würzburg. The edifice as built does in point of

7.
Johann Balthasar Neumann,
Residenz of Prince-Bishop Schönborn, Würzburg, stairway.
8.
Matthäus Daniel Pöppelmann,
Zwinger, Dresden.
9.
Johann Lukas von Hildebrandt,
Schloss Belvedere, Vienna, façade.

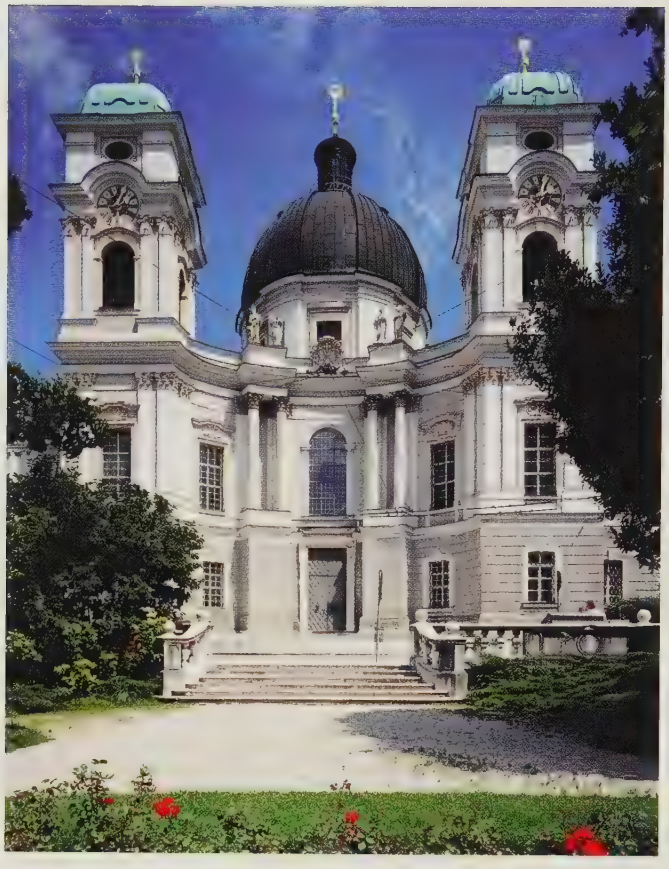
7

8

fact feature French elements, such as the projecting central main room on the main façade, whose plan evokes the precedent of Vaux-le-Vicomte. The external elevation over two levels is "Germanized" by the presence of irregular pediments, probably by the Austrian, Johann Lukas von Hildebrandt. On the other hand, the complex volumes and freely handled ornamentation of the chapel has much in common with the churches of Neumann and Zimmermann. But the supreme originality of the Residenz at Würzburg is the spectacular staircase (*Treppenhaus*), erected and decorated between 1737 and 1750 **[7]**. Unfolding up a vast cage decorated by Giambattista Tiepolo from 1750, the successive flights—the first simple and the second double—attain a majesty comparable to that of any great Italian (Caserta) or Spanish (the Escorial) achievement. Neumann built other equally remarkable staircases in the Rhine castles of Bruchsal (1731–32) and Brühl (1740).

9

Austrian architecture, relatively less exuberant, was dominated by artists who trained in Italy. Johann Lukas von Hildebrandt (1668–1745), who had been a pupil of Carlo Fontana in Rome, employed Italian patterns in his major work, Schloss Belvedere in Vienna, built from 1714 on **[9]**. Johann Bernhard Fischer von Erlach (1656–1723) was also educated in Italy, where he absorbed the works of Bernini



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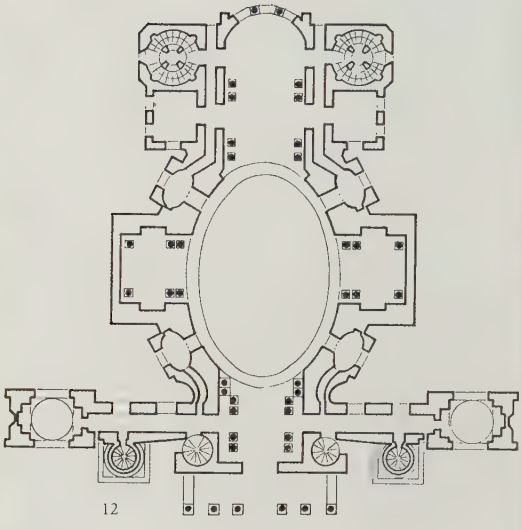

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13

and Borromini. The church of the Trinity at Salzburg (Dreifaltigkeitskirche, 1694–1707) reverts to an oval plan combined with a concave façade flanked by two towers, in the center of which detached columns stand out from the wall. Although this pattern directly recalls Borromini's plans for Sant'Agnese, the adaptation to a religious brief of superposed bossing and orders is unusual **[10]**. The masterpiece of Fischer von Erlach is undoubtedly the Karlskirche in Vienna (1716 onward). This monumental building's originality stems from the blending of several influences **[11]**. Borromini's transpires in the oval plan of the principal space and in the two bell towers adorning the ends of a façade with no organic link to the sanctuary **[12]**. But the antique temple colonnade in the central zone, complete with two triumphal columns to either side, imitations of the Trajan and Antonine Columns, is of a spirit foreign to the Roman Seicento and prefigures the more austere taste that was to dominate in Europe by the end of the 18th century. Nearer the Italian decorative outlook is the work of the Tyrolean Jakob Prandtauer (1660–1726). Enlivened by a constant interplay of curves, the abbey at Melk (1702–26), together with its convent buildings, rises on a headland over the Danube. Here, the taste for abundance was combined with plans and tumultuous elevations very much in keeping with the period **[13]**. Prandtauer also exploited strong contrasts in forms: the dome of the church, with its astonishing silhouette, and the onion-bulb towers set off with great projections loom above a long, rather bare and regular frontage. Inside, the walls recall the elevations of Vignola's Gesù, but in a

10.
Johann Fischer von Erlach,
Dreifaltigkeitskirche,
Salzburg, façade.
11.
Johann Fischer von Erlach,
Karlskirche (dedicated
to Saint Charles Borromeo),
Vienna, façade.
12.
Johann Fischer von Erlach,
Karlskirche, Vienna, plan.
13.
Jakob Prandtauer,
abbey at Melk.

14.
Christoph Dientzenhofer,
church of St. Nicolas,
Malá Strana, Prague, interior.
15.
Royal palace, Wilanów.

14

spectacularly undulating version. Every domain of the Habsburgs was affected by this taste. In Hungary, the castle of Prince Eugene at Ráckeve limits French influence to the overall form of the building, broad and low, while the decoration is pure Italian.

In Bohemia, a whole district of Prague is awash with magnificently decorated palaces: the Malá Strana on the hillside leading up to the Castle, reached by crossing the Charles Bridge on the Vltava, with its expressive sculptures. The quarter clusters round the church of St. Nicolas (Sv Mikulá?), started in 1703 by Christoph Dientzenhofer and finished in 1752 to plans by his son, Kilian Ignaz (1689–1751). The single, polychrome nave is propelled by the ceaseless movement of the undulating walls, accentuated by pilasters placed on the diagonals, and brought to life by the light pouring through the cupola **[14]**.

Poland

Architectural activity was significant during the rule of Sigismund III Vasa (1587–1632), a friend of arts and favorable to the Catholic Reform, and that of his son Ladislas IV (1632–48), especially as Poland was untouched by the Thirty Years' War.

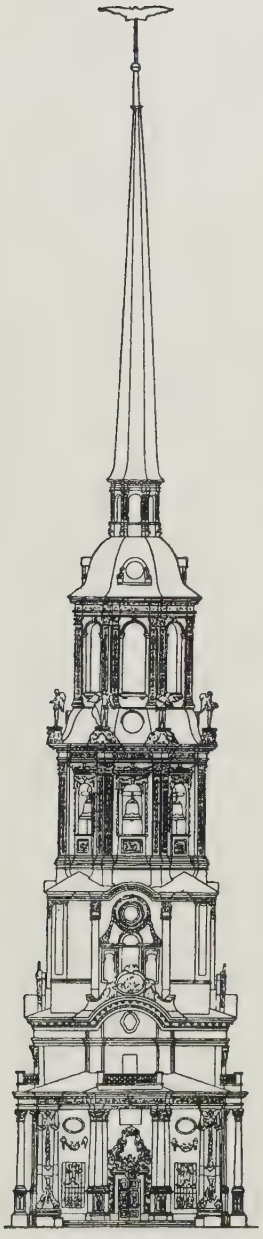
The bonds between the Vasas and the Habsburgs favored the development of a style influenced by Italy and the Jesuits, who built a church for the Society at Krakow (church of St. Peter and St. Paul, 1605–09) by Giovanni Trevano, and the church of the same name at Vilnius, built much later (1668–84) by Jan Zaor. The country's cities were embellished by many buildings (the Ringplatz at Zamosc, the enlargement in 1638 of the bishop's palace of Kielce by Tomasz Poncini). In Warsaw, Sigismund III rebuilt the Royal Palace in the form of a pentagon, incorporating the medieval structures (1597–1619), and erected the edifice later dubbed the Palace Casimir in the Italian style, with loggias. A host of Polish nobles aped the sovereign's example, and the 1640s has thus been called the "decade of palaces." The most beautiful example is perhaps the Koniecpolski castle at Podhorce (today Pidgirce in the Ukraine). Built between 1635 and 1640, the building is a mixture of French ideas (the overall organization and the garden) with ornamental motifs inherited from the Italian Renaissance.

This eclecticism in the choice of sources reappears in religious architecture, as shown by the church of the Bernardines at Lwów (1600–30) designed by Paolo Romano. Architecture was given a further spur by John III Sobieski (1676–96), who had raised the Turkish siege of Vienna. The principal protagonists were the sculptor Andreas Schlüter and the military engineer Tylman van Gameren, a native of Utrecht who trained in Italy, learning from Palladio and Scamozzi before settling in Poland round about 1670. In collaboration, they completed the Krasinski Palace at Warsaw, whose majestic façade marked by Ionic pilasters on a rusticated base and crowned by a pediment is of a restraint closer to Palladio than to elaborate Roman models. Schlüter also worked at the royal palace of Wilanów, also known as Villa Nova from 1692, under the direction of an Italian, Agostino Locci. This suburban residence, freer in style, offers a Polish transposition of the relaxed spirit of a Roman villa devoted to *otium* (1692) **[15]**.

15

16.
Church of the Archangel Gabriel, Moscow, elevation of the Menchikov tower.
17.
Bartolomeo Francesco Rastrelli, Cathedral of the Resurrection at the Smolny Convent, St. Petersburg.

It was under Augustus II the Strong and his son Augustus III, at the same time electors of Saxony and kings of Poland, that artistic activity was at its most intense. Augustus II cherished the idea of building in Poland monuments as impressive as those then under construction in Dresden. The *vedute* of Warsaw painted by Bernardo Bellotto between 1767 and 1780 provide an idea of the Baroque buildings that then adorned the city (the Krasinski Palace, the Blue Palace, façades of the churches of the Visitation and the Carmelites). Under Augustus III, Zacharie Longuelune and Johann Christoph Knöffel imposed an even more ornate style. Existing monuments (the royal palace, the palace of count Sanguzko, the Radzyn Podlasky Palace) were enlarged. Italian influences persisted in religious building, as at Krakow (Trinitarian church, 1752–58, and the church of the Piarists, 1759, by Francesco Placidi). Most of the church of the Salesians in Warsaw was executed by Giacomo Fontana, while, in 1638, Bernhard Merderer began the Uniate cathedral of St. George, in Lwów (Lviv).



16

The architecture of the tsars

In Russian history, the 17th century is regarded as the last century of the Middle Ages. It started with disorders following the death of Boris Godunov (1605) and ended with the reforms of Peter the Great and the foundation of St. Petersburg. The Byzantine tradition subsisted in spite of the diffusion of Western forms through Poland and Little Russia (Ukraine). With the return of religious purity promulgated by Patriarch Nikon (1605–1681), churches mushroomed, mainly in Moscow, and existing buildings were overhauled. This was the golden age of the monastery. Bell towers and ante-naves were added to church plans, while the polychrome façades with many emphatically modeled projections were adorned with complicated cornices, clusters of columns, and exuberantly ornamented doorways. The pyramids of ogee arches or *kokochniki*, evocative of women's ceremonial headgear, the stone pyramidal roofs with their spires, or *chatiors*, supporting the onions that became more widespread at that time, the polychrome materials (brick on the walls, white stone ornaments, multicolored ceramic friezes) and the exuberant decoration are typical of Muscovite architecture. Although developments took place during the reign of Mikhail Feodorovich (1613–45), it was during the rule of Tsar Alexei Mikhailovich (1645–76), father of Peter the Great and founder of the Romanov dynasty, that religious architecture made its greatest strides and that Western culture percolated into Moscow. Churches became standardized, consisting of a square nave with apses, but with no pillar, covered with a groined arch and with five onion turrets. The church of the Trinity at Nikitniki (1628–53) established the template, which was often copied, as at the church of St. Gregory of Neo-Caesarea (1667–69). Later achievements reveal a search for symmetry in the plan and for contrast between the tiers of *kokochniki* and the slender towers. Decoration became excessive.

In civil architecture, attachment to tradition endured (timber construction), even if the citadel of the Kremlin was modernized during the reign of Alexei (enceinte and towers): the palaces and administrative buildings damaged in the course of unrest at the beginning of the century or destroyed at the time of the 1626 fire were partly rebuilt. The palace of the Terems (1635–37, destroyed) was set up on the vaults of 16th-century

17

18.
Peterhof (Petrodvorets),
St. Petersburg, Great Palace
and the Great Cascade.

19.
Tsarskoye Selo, St. Petersburg, the Great Palace.

workshops where the garments of the tsar and the imperial family were made. The façade of this sumptuous residence combines Western forms (pilasters, triangular pediments) and typically Russian ornaments (window frames, earthenware). The churches of the Kremlin were joined into a coherent whole under a single roof by Osip Startsev. The architect also designed the gates and the Teremok, with its polychrome ceramics in the *metochion* (estate) of the metropolitan (the *podvorie*, Krutitsy), one of the finest accomplishments of the late 17th century.

Russian Baroque trends. The Baroque style did not flourish in Russia until the end of the 17th century, during the reign of Peter the Great (1689–1725). The break with the old models was dramatic in the new city of St. Petersburg, built in the European style, but Moscow witnessed several Baroque currents. Muscovite architecture at the end

of the 17th and the beginning of the 18th century is characterized by the so-called "Naryshkin" Baroque, from the surname of Peter the Great's mother, Natalia Kirillovna Naryshkina. The finest examples are the church of the Intercession of the Virgin at Fili, the church of the Trinity at Troitse Lykovo (1690–95), and the church of the Icon-of-the-Praying-Virgin in the domain of Sheremetev (completed in 1704), commissioned by the Naryshkins themselves. Sumptuously decorated, they were the source of the first Russian Baroque current to which the patrons lent their name. On the exterior of these edifices, roof crests ousted the traditional tiers of *kokochniki*. Lavish decoration remained the rule, but was combined with Baroque motifs imported from Poland or the Ukraine. These churches, often of central plan, were widely imitated.

Under Peter the Great, the monuments built in Moscow by the tsar or his close entourage were heterogeneous in style, Baroque, classical, and Mannerist. The most remarkable building is the church of the Archangel-Gabriel (1704–07) erected by his favorite, Prince Alexander Danilovich Menshikov. The tower-like construction (hence the name, Menshikov tower) combines a traditional composition (cube surmounted by a tall three-level bell tower crowned by a spire, the highest in the city but destroyed by lightning in 1723) with European architectural rhetoric in the details (porch with twisted columns on pedestals, Baroque sculpture) **[16]**. The new current is more easily detectible in private residences, such as the palace of Franz Lefort, which introduced classical forms. It was started in 1697, then altered and completed after Lefort's death two years later by Giovanni Mario Fontana (1634–1714) for Prince Menshikov.

But it was in St. Petersburg that Western architecture made the most serious inroads. The tsar, who had visited the United Provinces, England, and Germany (1697–98), as well as France later (1716–17), was determined to modernize the nation. Borrowing techniques, materials, and architects from all over Europe, he founded the city at the estuary of the Neva in 1703. St. Petersburg, which became the capital of the Russian empire in 1712, became a cosmopolitan conurbation with an international feel. Summoned in 1716, a onetime pupil of Le Nôtre's, Alexandre Le Blond (1679–1719), gave the city its definitive plan in the shape of a trident with three great arterial roads, recalling somewhat the junction (*patte d'oie*) at Versailles. Here, the streets, the most significant being the Nevski Prospect, converge toward the Admiralty. The city presents several styles. Domenico Trezzini (c. 1670–1734) chose a sober, even austere, Baroque style close to that of the churches of northern Europe for the Vauban-type fortress of Peter-and-Paul, built from 1706 on an island in the middle of the Neva, and for the cathedral (1712–33) it houses. His Palace of the Twelve Colleges (1722–33) and the Summer Palace of Peter the Great (1710–14) were in a similar vein. Alexandre Le Blond designed the project for the palace of Peter the Great at Peterhof (Petrodvorets) to the west of the city on the southernmost shores of the Gulf of Finland, supplemented by a park with terraces ornamented by fountains, cascades, and basins which descend to the sea (a Russian version of Versailles or of Schloss Belvedere in Vienna). Gottfried Schädel, from Hamburg, built the Menshikov Palace on Vasilievsky Ostrov. A little farther on, in Oranienbaum (Lomonossov), on a hill, Schädel built an imposing palace for Menshikov, with a central pile flanked by symmetrical pavilions.

After the chaotic succession of Peter the Great, the Baroque enjoyed its heyday during the reigns of Anna Ivanovna (1730–40) and Elizabeth Petrovna (1741–62). The central figure was Bartolomeo Francesco Rastrelli (1700–1771), son of an Italian

sculptor that Peter the Great had invited to St. Petersburg. The architecture he designed was monumental, colorful, and exuberant (Vorontsov Palace, 1743–45; Stroganov Palace, from 1753; the Winter Palace, 1754–62), with a strong French flavor. In the 1730s Rastrelli built a summer residence (the Annengof) for the tsarina, Anna, in the Moscow district of Lefortovo, an imposing Baroque edifice, like her winter palace at the Kremlin, both since vanished. He also devised the regular plan of the Smolny convent, where only the cathedral conforms to his vision, and he transposed the church of the Invalides in Paris into the Russian tradition by endowing it with onion domes **[17]**. More especially, he enlarged the Peterhof (1747–52 onward; **[18]**) and built the great palace of Tsarskoye Selo (1752–56). Rastrelli unified the various existing parts under a single roof. The building, more than 300 meters long and framed by two lateral pavilions housing on one side a grand staircase and on the other a chapel topped with five onion-domes, presents a most impressive front. The abundant use of columns in the foreparts, unusual framings for the windows, and the many statues place the building firmly in the great Italian rhetoric of the Baroque age **[19]**. In Kiev, Rastrelli built the collegiate church of St. Andrew (1749–58). With the ascension of Catherine II (1762–96), Neoclassicism appeared, but the tsarina added to the palace at Oranienbaum a small Chinese pavilion, recently restored, in the purest Rococo style, together with the pavilion of the Mountain.

Northern Europe

The Scandinavian lands

French supremacy undoubtedly influenced the architecture of Sweden and Denmark. Swedish sovereigns even had French architects in their service: Simon La Vallée, his son Jean, and Nicodème Tessin the Elder (1615–1681), the creator of the grandiose palace at Drottningholm in Stockholm (from 1662). His son, Nicodème Tessin the Younger (1654–1728), traveled to both Italy and France. In rebuilding the royal palace in Stockholm after the fire of 1697, he took as his starting point Bernini's abortive plans for the Louvre, endowing the building with an impressive colonnade. The palace was integrated into an urban project of great scope, which entailed the construction of a new cathedral. Tessin also devised a plan to complete the Louvre.

Except for the palace of Charlottenborg in Copenhagen (1672), there were few significant achievements in Denmark before the mid-18th century. It was during the reign of Frederick V that the capital's Amalienborg Square was designed by Nils Eigtved (1701–1754). Octagonal in form, the royal square is bordered by a monumental unit of four identical palaces erected from 1750 on. One of the streets leads to the royal church, a plan by Eigtved modified by the Frenchman Nicolas Henri Jardin. The circularly planned, domed building is decorated with a colonnade and a forecourt that is Neoclassical in spirit. It was completed after the architect left for France in 1771.

The Low Countries

The Low Countries played a leading role in the history of painting in the 17th century, but that was not the case in architecture, which was different in the Calvinist United Provinces and the southern Catholic regions. On the death of Philip II in 1598, the government of the provinces that remained Catholic and Spanish was handed over to his daughter, the Archduchess Isabel, and to her husband Albert, son of Emperor Maximilian II. After the wars at the end of the 16th century, the provinces experienced a more fruitful period, and architecture, under the wise governance of the archdukes, benefited from the newly regained wealth of the cities and the faith rejuvenated by the Counter-Reformation.

20

There emerged a style whose originality owed more to decoration than to architectural structure. A symbol of this revival, the studio and residence that Rubens built in Antwerp and in which he set up home in 1615 eschewed contemporary Italian norms, which the painter's sojourns in that country might well have imposed. In point of fact, the portico separating the court from the garden remains eminently Mannerist, with its banded Doric columns seemingly lifted straight out of Serlio's treatise, its incomplete entablature (missing the frieze), its broken pediment, and the central, three-segment opening, influenced by Michelangelo's Porta Pia. The forms inherited from the Renaissance are here reinterpreted in a rich style that allots a major role to sculpture.

In Lille, the Old Stock Exchange (Vieille Bourse or Bourse des Marchands), designed by Julien Destrez from 1652 in what was then a Spanish city, is a splendid example of how this taste survived into the middle of the century **[20]**. The façade rising onto the town square (Grand-Place) redeploys the traditional schema of the Palazzo Caprini by Bramante, renewed in Flanders by the example of Antwerp city hall, consisting of a rusticated plinth bearing two rows of orders. But the teeming and varied decoration reverts to models of the contemporary Flemish *ornemanistes*, in which traditional forms are weighed down with geometrical motifs and decorative sculpture. A Doric or Ionic pilaster with bossed blocks every third of its height alternate with anthropomorphic supports, telamones, and caryatids. This formal interplay is moreover supplemented by the color contrast between stone and brick.

Religious architecture made extraordinary strides too: the archdukes had nearly three hundred churches rebuilt, with the cities contributing their fair share to the reconstruction effort. New religious orders—Dominicans, Capuchins, Recollects, Carmelites, and Brigittines—were settled, and built churches, convents, and houses for their orders all over the territory. In the vanguard of this spiritual revival, the Jesuits did much to disseminate Italian forms. One of their first achievements was the college of the Society in Maastricht (completed in 1614) by Pieter Huyssens. The Jesuit architect also excelled himself at Saint-Loup in Namur, with its remarkable vaults (started in 1621), and in St. Charles Borromeo in Antwerp (1613–25), which had been started by Father François d'Aguillon.

21

22

20.
Julien Destrez,
Julien Destrez, the Vieille Bourse, Lille. Engraving and watercolor by E. de Boullonnois, 1652. Lille, Musée de l'Hospice-comtesse.
21.
Pieter Huyssens,
church of Saint Charles Borromeo, Antwerp.
22.
Church of Saint Michael, Leuven.

Huyssens built the tower and the façade, which again adopts the Gesù configuration, but with a third level. Diverse architectural oddities, such as the use of columns as quoins, as well as the lavish decoration, confer a typically Flemish appearance on the building **[21]**. This architect was also project superintendent for the Benedictine abbey of St. Peter's in Ghent, started in 1629 but only completed in the 18th century (façade and cupola), with its exceptional plan and volumes, where a vast square space extends into a long rectangular choir. Albert's architect, Jacques Francart (1583–1651), built the church of the Great Béguinage (Groot Begijnhof) at Mechelen (1627–47), the (destroyed) church of the Jesuits in Brussels, as well as the façade of the church of the Augustinians (rebuilt in front of the church of the Trinity).

The role of the Jesuits was also crucial in other provinces, such as the Cambrésis, marked by the personality of Father du Blocq. The clergy of the Cambrai region showed itself particularly active under the aegis of Archbishop François van der Burch. Jean du Blocq designed the church of Cateau (today St. Martin's) and the church of the Cambrai Jesuits (now the chapel of the Grand Séminaire), as well as the chapel in the college of Saint-Omer and the chapel of Saint-Jacques in the college of Aire-sur-la-Lys. Work could only start on the plans for the church of the Cambrai Jesuits after the city

had been attached to France in 1678. Two other Jesuit architects, Jean Beegrand and Jean Verbessum, then directed the construction, keeping to the plans of their predecessor. The façade is a very free interpretation of that of the Gesù. The main order, which is formed of banded Composite pilasters, frames the windows lighting the aisles, but the entablature is terminated in a remarkable manner, giving way to a strongly vertical bay leading up to a pediment that is itself extremely slender, thereby lending the whole façade something of a Gothic thrust.

Nearby Hainaut boasts an astonishing building: the abbey of Saint-Amand. At the beginning of the 17th century, the historic Benedictine abbey, whose scriptorium had at one time been the source of so many masterpieces, had fallen on hard times, when an exceptional figure, Abbé Nicolas du Bois from the city of Mans, decided to return his house to its long-lost eminence. With this intention, the prelate himself drew up plans for an immense abbey, of which the tower porch remains, and for an elaborate convent complex of which hardly any vestiges survive. This monumental project was anachronistic: the abbey church, with two transepts and an interior elevation over four levels, reverted to the oldest Romanesque architecture. The bell tower-cum-porch still standing is also a throwback to medieval architecture, adhering to the principle of the ancient Carolingian *Westwerk*, through the intermediary of Cambrai Cathedral. Nothing could be more different from the Italian-type churches built by the Jesuits elsewhere in Cambrai. However, on these resolutely backward-looking structures, du Bois placed an entirely contemporary and exuberant decoration. The superposed Classical orders extend up to the base of the dome. The window frames and scrolls also correspond to the spirit of the time, even if these last are carved in the shape of coiling snakes, in an allusion to the legend of Saint Amand.

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The role of the archdukes was also critical in the reorganization of their states, which had been sorely pressed during the wars. An important figure in this arena was a protean artist, Wenzel (or Wenceslas) Coeberger (1561–1634), a native of Antwerp, who traveled to Paris, Rome, and Naples, where he married, before returning to settle in Flanders. He undertook to drain the Moeres, a marshy area on the North Sea littoral, and, having obtained the privilege to establish them, built pawnshops all over the Catholic Low Countries (Valenciennes, Arras, Lille). The gable of the spectacular building at Bergues presents a synthesis between the traditional Flemish form and that of the façade of a Baroque church, with a clear separation between the different levels, lesenes recalling classical orders, retaining scrolls between the two upper sections, of decreasing width, and an interplay of curve and counter-curve. The frames distributed over the façade suggest a multitude of bays in a system of varied forms and sizes, giving the whole unit a highly original abstract character. In the detail, the decoration is of singular inventiveness, with Ionic volutes framing grotesque masks at the level of the entablature and triglyphs placed above the pilaster, of Michelangelesque stamp.

On the death of Albert in 1625, Isabel had taken over the reins of power alone; following her own demise in 1633, the Low Countries passed under the direct administration of the king of Spain. The most remarkable achievements of this period are the Jesuit church of St. Michael at Leuwen, begun by Father Willem van Hees

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(Hesius; 1601–90), which melds, as at Saint Charles, a dynamic façade over three levels to archetypal Flemish decorative ebullience **[22]**. The reconstruction of the Grand-Place (town square) of Brussels after the bombardments of 1695 ordered by the marshal of Villeroy was one of the major achievements of the late 17th century. The majority of the guildhalls, as well as the residential complex of the dukes of Brabant on the eastern side, were rebuilt in a Baroque style under the direction of Willem de Gruyn.

Dutch classicism at of the schools of Palladio and Scamozzi. The Mannerist style that lingered on at the beginning of the century due to the enduring influence of certain monuments, such as the town hall in Antwerp, and also the spread of a formal vocabulary by way of the regularly republished works of Vredeman de Vries, now retreated before a more sober style, better adapted to the austerity of the Calvinist northern Netherlands. The success of the translations of Palladio and especially of Scamozzi was highly significant: the Italian model imposed was not that of Rome, but that of a post-Palladian Veneto, itself resistant to the Baroque exaggerations of Bernini and Borromini and susceptible to a less exuberant taste and more rational templates. At the same time, architects and patrons were impressed by the purposefulness and nobility of contemporary French solutions.

This classicizing rhetoric inspired the gate of St. Catherine in Utrecht (destroyed; 1621–25). In 1625, the rise to power of the stadhouder, Frederick Henry of Nassau, who surrounded himself with a well-nigh princely court, gave fresh impetus to architecture in the United Provinces. In 1630, the prince ordered the building of the palace of Rijswijk (since disappeared), close to The Hague, an elongated monument with French-style pavilions, as at the Tuileries. But the Palladian influence carried the day at the Mauritshuis in The Hague, a *palazzetto* built for John Maurice of Nassau in about 1633 by Jacob van Campen **[23]**. Rising at the edge of a canal on a lightly rusticated basement, the façade of this relatively small residence is organized from a noble order of giant Ionic pilasters, forming in the center a portico surmounted by a pediment, as in a Palladian villa.

23.
Jacob Van Campen,
the Mauritshuis, The Hague.
24.
Jacob Van Campen,
Town Hall, Amsterdam.
Gerrit Adriaensz.
Berckheyde, oil on canvas,
17th century. Staatliche
Museum Schwerin.

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The regularity and sobriety of the arrangement confer a nobility on the building that is a far cry from the overflowing and showy taste then prevalent in the Catholic provinces of the south. At the town hall of Amsterdam (the Stadhuis), built from 1648 on **[24]**, van Campen adapted the spirit of the Venetian masters to a much fuller program, but the correction of the superposed Composite and Corinthian orders in accordance with the doctrines of Scamozzi, the extension of the central section by a vast pediment, and the logic of the interior layout testify to characteristic stylistic understatement. The immense central space, known as the Citizens' Hall, or Burgerzaal, conceived like an ancient basilica, is redolent too of the archeological concerns of a Palladio. Several no less classical buildings were to adorn the large and wealthy Dutch cities of the 17th century, imposing edifices, such as the Noordeinde Palace (1639–45) in The Hague, by van Campen and Pieter Post (1608–1669), or the town hall of Enkhuizen, designed by Steven Vennecool in 1686, which presents a façade of great sobriety, animated only in the central part by the balcony, curved bays, and an oculus, as well as private houses, such as the Huis ten Bosch, a villa built by Post from 1645 in the environs of The Hague for the wife of Frederick Henry of Nassau, and the Oudezijs Voorburgwal in Amsterdam, by Philips Vingboons, whose façade is ornamented by tiers of orders. But the sobriety of the schemes did not prevent errors on the part of the master builders. An anonymous contractor, for example, endowed a house in Amsterdam (82 Geldersche Kade) with Doric pilasters with the correct capitals, but of absurd proportions (the height attains thirty times the width of the member).

At the end of the 17th century, Daniel Marot (1663–1752), a French Huguenot who had settled in The Hague after the Revocation of the Edict of Nantes (1685), introduced the Louis XIV style. Architect to William III, he built the audience chamber in the Binnenhof at The Hague, (1696–98) and in Amsterdam the central part of the Huis Huguetan (1734), today the Royal Library. For William—now king of England after the overthrow of his father-in-law, James II, in 1688—Marot also designed the interiors for Hampton Court Palace in London (1695–96).

The classical style was also adopted for religious buildings. The Nieuwe Kerk of Haarlem (1645) is characterized by van Campen's design of a Greek-cross plan inscribed within a square. The plan of the Nieuwe Lutherse Kerk (1668) in Amsterdam by Adriaan Dortsman presents in an original way a circle with a dome, doubled by an ambulatory that runs only halfway round its perimeter. As for the Nieuwe Kerke at The Hague, built by Pieter Noorwits and, after 1649, by Bartholomeus van Bassen, it adopts a sophisticated plan where curves combine with the rectangular outline of the plan in a Baroque spirit.

25.
Inigo Jones,
Queen's House, Greenwich, west front.
26.
Inigo Jones,
the Banqueting House, Watercolor by Thomas Malton Jr, c. 1790., Guildhall Library, London.

England: a special case

Under the Tudors, English architecture kept aloof from Italian models and this independence did not waver under the crypto-Catholic Stuarts and their successors. From the Renaissance to the 18th century, England followed her own path and, if she harkened somewhat to the charms of Italy, her references were more often Palladian than Roman. By the Enlightenment, however, the singular destiny of British architecture was making significant impact on developments in European art. The first craftsman in the evolution that had led to that situation was a protean creator—painter, stage designer, director of the royal entertainments—Inigo Jones (1573–1652), the first architect in the modern sense of the term England can boast. He went to Italy on two occasions. In the course of his second voyage, in the company of his protector Lord Arundel, who took him to Venice, Rome, and Naples, he studied Roman antiquities with the *Quattro libri* in hand, and gained hands-on knowledge of the achievements of Palladio in the Veneto. Moreover, he met the self-appointed heir to the master, Vincenzo Scamozzi. Returning to England and now Surveyor of the King's Works, Jones achieved an original synthesis of Palladio and antiquity, developing

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27.
Inigo Jones,
St. Paul's Church,
Covent Garden, London.
28.
Richard Boyle,
Earl of Burlington,
Chiswick House, London.
29.
Colen Campbell,
Mereworth Castle, Kent.
Engraving by Hendrik
Hulsbergh (Colen Campbell,
Vitruvius Britannicus,
or The British Architect...,
vol. 3, 1724.)
30.
William Kent,
Holkham Hall, Norfolk,
south front.

principles of simplicity, clarity, and balance in a series of buildings that guided English architecture toward a style very different from that then prevalent on the Continent.

In Greenwich, the Queen's House, a large residence started in 1616 for Anne of Denmark, contains many references to Palladian villas, including the loggia and the treatment of the walls, which are either naked or else clad in smooth rustication, imparting an impression of decorative austerity that reinforces the parallelepiped "block" effect **[25]**. The Tuscan order, whose simplicity symbolizes the rigor of the Anglican Church in St. Paul's Covent Garden (1630–31), was directly derived from Palladio's treatise **[27]**. For the frontage of the Banqueting House, London, a hall which was to have formed part of the much vaster palatial complex of Whitehall, Jones returned to the two superposed orders at the Palazzo Barbaran da Porto, in Vicenza (1619–22) **[26]**. The restoration of St. Paul's, which he undertook from 1634, comprised a columnated portico inspired by a temple in Book IV.

John Webb (1611–1672) pursued the Palladian line of his master, but his plans for a palace for Charles II (the King Charles Building in Whitehall) were only partially carried out. In the wake of Inigo Jones, the Scot Colen Campbell (1676–1729) appeared as the most perfect representative of British Palladianism. Urged by his patron, the

27

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architectural enthusiast Lord Burlington, (who built from 1725 Chiswick House **[28]** on the outskirts of London on the model of the Villa Rotonda, though smaller than the original). Campbell, author of *Vitruvius Britannicus*, designed several private residences in the Palladian style: Burlington House in London combined a rusticated basement and Ionic order from the Palazzo Iseppo da Porto with a serliana in the forepart. Wanstead House, Essex, and Mereworth Castle, Kent (1723), were further variations of the Palladian villa, the second being a more monumental counterpart of the Rotonda **[29]**. Lord Burlington was also the principal patron and inspirer of William Kent (1685–1748), another protagonist of British Palladianism, who built Holkham Hall in Norfolk **[30]**, where Palladian motifs appear deposited into a rather heteroclite ensemble.

29

30

31

Sir Christopher Wren,
St. Paul's Cathedral, London,
31. main front. Water color drawing by Antonio Adami, 18th century. Private Collection.
32. cupolas.

One cannot however limit British architecture to neo-Palladianism alone. The greatest English architect of the era, Sir Christopher Wren (1632–1723), a mathematician and astronomer by training, never even traveled to Italy, going instead to France (1665–66), where he familiarized himself with the great buildings or sites, even meeting Bernini, then in Paris wrestling with the project for the new Louvre. Appointed to oversee the rebuilding of London after the Great Fire of 1666, he devised plans for fifty-two parish churches, all different, although not unnaturally it proved impossible for him to supervise their construction. His masterpiece is the vast cathedral of St. Paul's, for which his earliest plans date from 1668, and which he lived to see completed in 1710. In the beginning, the architect envisaged a Greek-cross plan, as the superb so-called Great Model still visible in the cathedral demonstrates, a bold design intended to compete with Michelangelo's St. Peter's (1673). To satisfy the demands of the clergy, however, he had to abandon the central plan and adopt a more traditional Latin cross with nave and aisles. The façade develops the theme of the temple portico over two levels, framed by two tall towers **[31]**. The superposition of the orders refers to the dome of the Invalides, while the use of twin pillars echoes Perrault's front at the Louvre. The colossal dome takes as its starting point that of St. Peter's, but, as in the work of Hardouin-Mansart, a drum doubled by the attic story makes it possible to light the superposed cupolas within **[32]**. The whole is strikingly majestic: without knowing Rome, Wren captured the grandeur of a Michelangelo or a Bernini.

33.
Nicolas Hawksmoor,
Christ Church, Spitalfields, London.
34.
James Gibbs,
St Martin's-in-the-Fields, London.

33

More expressive still was the rhetoric employed by the chief successors of Wren. Sir John Vanbrugh (1664–1726), of Flemish origin, received a traditional general education before turning to architecture. He specialized in the construction of vast country houses, Castle Howard (Yorkshire), for the earl of Carlisle (1699–1712), and Blenheim Palace (Oxfordshire), given by Queen Anne to the duke of Marlborough in gratitude for his victory over the armies of Louis XIV at Blindheim in Bavaria, to which the palace owes its name (between 1705 and 1724). This massive construction, which can vie with Versailles, is noteworthy for the complex composition of its façades.

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Probably in reaction to Louis XIV's château, Blenheim is composed of many pavilions of varied forms and with powerful effects of relief. The Colossal Corinthian order in the center is counterbalanced by the Doric on the wings; the entrance portico is surprisingly intricate in rhythm and elevation **[35]**. The variety, which extends to all parts of the palace, is a far cry from Palladian austerity. The taste for diversity, in conjunction with the still deep roots of the Gothic tradition in England, led Vanbrugh to explore other avenues of inspiration. A medieval influence is patent in the house he built himself at Blackheath (1717–18). It is in fact one of the first manifestations of the Gothic Revival, the initially English but soon European movement that triumphed in the 19th century. As early as 1742, however, a treatise by Batty Langley with the significant title, *Gothic Architecture Improved by Rules and Proportions*, had appeared.

British architecture thus evolved eclectically, a tendency found once again in the work of Nicholas Hawksmoor (1661–1736), a pupil of Wren's and a collaborator of Vanbrugh's at both Castle Howard and Blenheim, which he completed. These multiple influences spawned a syncretism that produced a very expressive architecture, in which classical forms were associated with medieval lines, especially in the many churches he

35.
Sir John Vanbrugh,
Blenheim Palace,
Blenheim (Oxfordshire).

37

36.
James Gibbs,
the Radcliffe Camera, Oxford.
37.
John Wood the Younger,
Royal Crescent, Bath.
38.
Thomas Jefferson,
Monticello, Virginia.
39.
Thomas Jefferson,
Virginia State Capitol,
Richmond.

36

built, such as the London churches of St.-George-in-the-East in the district of Stepney (1714–34) and Christ Church, Spitalfields (1719–29) **[33]**. This taste for diversity is also apparent in the layout of the park at Castle Howard.

The two main trends in English architecture, Palladian rigor and formal diversity, resurfaced to singular effect in the works of James Gibbs (1682–1754). Gibbs, who had worked in the workshop of Domenico Fontana in Rome, took inspiration from Palladio for the church of Saint-Martin-in-the-Fields in London (1721–26). To the nave treated as an ancient rectangular temple he added a high steeple of Gothic spirit, thus creating a hybrid that in England met with a certain success **[34]**. St.-Mary-le-Strand in London is very Mannerist; the Radcliffe Camera, in Oxford (1739–49), is highly original in its combination, for which there is no exact precedent, of a church plan (rotunda with dome built on two concentric cylinders) and a palace elevation with a rather squat profile (Colossal order of twin pillars on a rusticated basement) **[36]**.

In the 18th century, English architecture was especially successful in the domain of city planning. The spa town of Bath, a spot fashionable with London society, was redeveloped by two architects, John Wood the Elder (1704–1754) and his son, John Wood the Younger. The father built the Queen's Square (1729), based on the place Vendôme in Paris, and began the Circus (1754), a vast circular open space ringed by identical façades with three superposed orders that is reached by three equidistant streets. Wood the Younger completed the Circus and from 1767 to 1775 built the spectacular semi-ellipse of the Royal Crescent, uniformly decorated with Ionic façades running some five hundred meters in front of a sloping lawn planted with trees **[37]**. The principles that governed the planning of Bath—the opening of squares, the adaptation of the plans to the topography, the significant place allotted to Nature, the repetitive regularity of the façade decoration—were to mark the idea of the city enduringly, both in Great Britain and throughout Europe.

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Not unnaturally, British architecture found itself exported to the English colonies, especially to America. The United States owes its independence not least to Thomas Jefferson (1743–1826), a politician but also an architect, who had a notable influence on the planning of the fledgling American cities. Influenced originally by Palladianism, he was inspired more directly by ancient models: his villa at Monticello (Virginia) is a variation on the Rotonda **[38]**, but the Capitol at Richmond (Virginia) is more reminiscent of the Maison Carrée in Nîmes **[39]**. More generally, the symbols of American democracy—the White House, the Capitol in Washington—are clearly indebted to English Palladianism. The Republican ideal is embodied in the rigor of forms inherited from a reexamined antiquity.

The Close of the Baroque Era

FROM BRAMANTE TO GABRIEL, European architecture was exclusively Vitruvian, founded on the ancient models bequeathed by *De architectura* and prestigious monuments such as the Theater of Marcellus, the Temple of Fortuna Virilis, and the Pantheon. This corpus of forms, venerated as a real if intangible canon, or else ironically, mischievously, even perversely distorted, constituted a unified source. In the second half of the 18th century, however, the discovery of other antiquities, in Pompeii and Herculaneum, in Greece and Magna Graecia, suddenly opened up new horizons to Italian architects, as well as to the many foreign architects who went on the Grand Tour. In 1750, Jacques Germain Soufflot (1713–1780) was one of the first to explore the ruins of Paestum. By 1787, the orders of the Parthenon were being reproduced in a handbook by the Italian Girolamo Massi (*Teoria e prattica dell'architettura civile*). Of greater antiquity, Greek architectural forms also appeared purer than the debased versions of imperial Rome, henceforth regarded as decadent. In an ideology dominated by the sentiment for Nature—for Rousseau's Nature as the prototype of original purity—Hellenic models met with considerable success; their existence showed that reference could be made to sources other than the Vitruvian manner, which for two centuries had nourished both Roman-style Baroque and the Grand Style *à la française* alike.

Fundamentally, it was the unicity of the Vitruvian manner that was being questioned. The idea that a different model could be equal in legitimacy to the "original" opened the door to a host of alternatives. The Italian Piranesi, reacting against this increasingly fashionable Hellenism, proposed a return to Etruscan antiquity. Neoclassicism thus bears in germ every other style: Gothic Revival, neo-Egyptian, the neo-Romanesque, neo-Byzantine, and every other "neo-" that fed into architecture in the 19th century. It was then the very spirit of architecture that was being uprooted, and the art of building began to lose its hard-earned coherence.

The column and Nature. One of the most spectacular characteristics of Greek architecture is the use of the column. In his *Essai sur l'architecture* (1753), Marc Antoine Laugier, Jesuit writer and connoisseur of architecture, advanced the notion that constructions using pilasters and arches—i.e., the near totality of all buildings built since Alberti—were to be condemned as being "against nature." The latter never produces anything square: only the column—an image of the tree of the primeval forest—is acceptable. Expounded at length and applied to every element of the decoration, this theory conflated the then novel Rousseauist conception of Nature with

Jacques-Germain Soufflot, Panthéon, Paris.

the long-held penchant of French taste for purism, already formulated in 1650 by Roland Fréart de Chambray. From that starting point, Laugier applied a vigorous critique to French architecture, and to Vitruvian architecture more generally, such as it continued to be practiced throughout Europe, where the pilasters, projecting entablatures, and various accidental features "disfigured" the façade. He defined the principles of a new sensibility, at the same time advancing some concrete stipulations. For interior elevations in churches, he advised a simple colonnade with a continuous entablature bearing a barrel vault. Some churches with interior colonnades were indeed erected in France, such as Boffrand's chapel at the Château de Lunéville and Saint-Vaast at Arras (the current cathedral) by Pierre Contant d'Ivry. At Saint-Philippe-du-Roule, in Paris, Jean-François Chalgrin solved the technical problem by building a barrel vault out of wood, much lighter than masonry.

Jacques Gondouin, École de Chirurgie, Paris, façade.

Father Laugier, however, was only providing the theoretical underpinning for a new style of religious architecture, a foretaste of which had already been given in the chapel at Versailles and in a plan for Sainte-Geneviève in Paris by Claude Perrault. In the 1730s, Giovanni Servandoni, an Italian artist who had settled in France, had proposed a first design for the church of Saint-Sulpice in Paris, where the façade with its two levels and five sections was treated as if this were a secular edifice with variations in rhythm and relief that accorded perfectly with the French tradition. In the final design, drawn up in about 1750, the considerably modified façade had forfeited this original articulation, which was replaced by a portico with a full colonnade redolent of St. Paul's Cathedral in London. The church of Sainte-Geneviève (today the Pantheon), designed by Soufflot in 1757, was a development of the approach adopted at Saint-Sulpice. Reduced to a temple portico, the façade broke definitively with the models of the Grand Siècle. The drum of the dome with its columns once again recalls Wren's at St. Paul's. But above and beyond these decorative effects, the whole building was novel in conception. The Greek-cross plan with the large dome over the crossing takes Wren's design as its starting point, but inside Soufflot

used colonnades which support rectilinear entablatures. The typically Roman grandeur of the edifice here combines with an apparently lightweight load-bearing system. The effect is lessened today by the fact that the pillars have been thickened and the vast openings Soufflot had in mind have since been filled in. In point of fact, the religious architecture of the period was striving to achieve a balance between classical monumentality and Gothic buoyancy.

The column was then the "truth" of a moralized architecture—just as David's heroic nudes were a reaction to the conventionality and immorality of Boucher's odalisques. As the decorative element par excellence, the column thus served an esthetic that preached simplicity and banished the variations in relief and rhythm characteristic of the French manner since Lescot. The façade of the École de Chirurgie (surgery school) in Paris, by Jacques Gondouin, is a perfect manifestation of this tendency. Greek temple porticos sprouted over the façades of public buildings, at the Grand Théâtre of Bordeaux, by Victor Louis, the theater of Besançon, by Claude-Nicolas Ledoux, and at the Théâtre-Français (today the Odéon) in Paris, built by Marie Joseph Peyre and Charles de Wailly. But they were also adapted to private houses in Paris, as at the Hôtel de Salm (today the Musée de la Légion d'Honneur), built by Pierre Rousseau, the Hôtel Guimard, built by Ledoux, and the Hôtel de Brunoy by Étienne-Louis Boullée, both destroyed. The provinces did not lag behind, as testified by Michel Lequeux's Hôtel d'Avelin and Hôtel de Petitpas de Walle in Lille, for example.

The principles of this natural architecture were to be extrapolated to their limits in the dazzling achievements of the two greatest French architects and theorists of the second half of the 18th century—Ledoux, designer in particular of the fifty-five *pavillons d'octroi* (duty tollbooths) encircling Paris and of a salt works, the Saline Royale, at Arc-and-Senans, and Boullée, the visionary adept of an art of sublime grandeur. The *Essai sur l'art* was to architecture is what Rousseau's *Social Contract* was to political philosophy or the works of the Marquis de Sade to libertine thought.

European Neoclassicism. Europe found herself torn between a fascination for Hellenic purity and admiration for the simplicity of English-style Palladianism. Italy remained relatively behind the game, with only Venice maintaining a strong Palladian tradition. Neoclassical buildings were not erected there until the 19th century. In Germany, on the other hand, birthplace of the influential antiquary Winckelmann, the Greek influence became very prevalent. The Brandenburg Gate in Berlin by Carl Gotthard

Langhans is the finest example of the Germanic Neoclassicism directly inspired by the Parthenon that was to make such inroads during the 19th century. But unadorned colonnades also made their way to Madrid, along the frontage of the Prado Museum by Juan de Villanueva, as well as to Russia, where British architects like Charles Cameron rubbed shoulders with Italians such as Giacomo Quarenghi and Russians trained in France like Ivan Starov. St. Petersburg became a mecca for the new international style: the Tauride Palace, built by Starov, successfully juggles porticos and colonnaded hallways. The Admiralty, a work by Andrei Zakharov, a student of Chalgrin's in Paris, is a monumental building with heavy Doric porticos open to the banks of the Neva, while the English Palace in Peterhof, by Quarenghi, took as its starting point Palladio refracted through the work of Campbell at Wanstead House (hence its name).

Neoclassical architecture drew on various sources of inspiration. The eclecticism that emerged toward the end of the 18th century persisted in the first decades of the 19th. Napoleonic Europe and Romantic Germany continued to feed off Greek sources, while rediscovering the charm of the Middle Ages. Highly revealing in this respect is the work of the English architect Sir John Soane, who, having studied Piranesi in Rome and Ledoux in France, was perhaps the first to mix styles, juxtaposing in his own London home classical antiquity, Egypt (a *mastaba*), and the Middle Ages (the ruins of a monastery). Such picturesque, quirky syncretism was a far cry from the architecture produced by Filippo Brunelleschi in the Quattrocento. The era of the Baroque had indeed come to an end.

Claude-Nicolas Ledoux,
royal salt works, Arc-et-Senans,
director's house.

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